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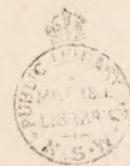
THE
BIRDS OF AUSTRALIA.

BY
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PITTA STREPITANS, Temm.

Noisy Pitta.

Pitta strepitans, Temm. Pl. Col. 333.—Jard. and Selb. Ill. Orn., vol. ii. pl. 77.

Pitta versicolor, Swains. in Zool. Journ., vol. i. p. 468.

THE description of *Pitta versicolor* given by Mr. Swainson in the "Zoological Journal" agrees so accurately with the description and figure of *Pitta strepitans* in the "Planches Coloriées," that not the slightest doubt exists in my mind as to their identity; but which of these names has the priority is a point I have been unable satisfactorily to determine, in consequence of the latter work having been published in parts at irregular periods. Mr. Swainson, it is true, refers to the "Planches Coloriées," and institutes a comparison between his bird and the *Pitta cyanoptera*, beautifully figured in Pl. 218; the *Pitta strepitans*, on the other hand, forms the subject of Pl. 333, which we may reasonably suppose must have appeared at a much later period, although it may still have been prior to the publication of *P. versicolor*; the numbers of foreign works being frequently much in arrear in this country. In support of the priority of M. Temminck's name, I may quote a passage from the "Illustrations of Ornithology" of Messrs. Jardine and Selby:—"This species seems to have been unnoticed until the figure of M. Temminck, who received his specimen from Mr. Leadbeater. It then appeared to be the only individual of this form known to belong to New Holland; and it is only lately that Mr. Swainson has added a second species, in his *P. versicolor*, to the interesting ornithology of that country."

Never having seen this bird alive, I am unable to give any account of its habits and manners from my own observation. It is said to dwell in those almost impenetrable brushes of the eastern coast of Australia, and is tolerably abundant in all such localities between the river Macquarrie and Moreton Bay; it is also said to be very thrush-like in its disposition, and, as its long legs would lead us to suppose, resorts much to the ground, although it readily takes to the branches of trees when its haunts are intruded upon. Its food consists of insects, and probably berries and fruits.

The two young figured in the accompanying Plate with an adult were collected in the brushes bordering the river Clarence on the east coast, which must consequently be enumerated among its breeding-places. The circumstance of the young, like those of the Kingfishers, assuming the characteristic plumage of the adult from the time they leave the nest is very singular, and the knowledge of this fact is very important, inasmuch as it may lead to some valuable results in classification.

The sexes appear to present but little differences either in colour or size; some specimens, which I take to be males, however, differ in having the tail-feathers more largely tipped with green than others.

Crown deep ferruginous with a narrow stripe of black down the centre; on the chin a large spot of black terminating in a point on the front of the neck, and uniting to a broad band on each side of the head, encircles the crown and terminates in a point at the back of the neck; back and wings pure olive-green; shoulders and lesser wing-coverts bright metallic ærulean blue; across the rump a band of the same colour; upper tail-coverts and tail black, the latter tipped with olive-green; primaries black, becoming paler at the tips; at the base of the fourth, fifth and sixth a small white spot; sides of the neck, throat, breast and flanks buff; in the centre of the abdomen a patch of black; vent and under tail-coverts scarlet; irides dark brown; bill brown; feet flesh-colour.

The figures are of the natural size.

Back hardly warm enough rather too gray
but the whole clear
as possible

Green rather as they



PITTA VIGORSII, *Gould.*

Vigors' Pitta.

Pitta brachyura, Vig. & Horsf. in Linn. Trans., vol. xv. p. 218.

A SINGLE specimen of this beautiful species of *Pitta* forms part of the collection of the Linnean Society of London, where it has always been considered as identical with the *Pitta brachyura*, but from which it differs in many important characters, among the most conspicuous of which may be noticed its larger size, and the narrow streak of light greenish grey which passes from the nostrils over each eye, and nearly surrounds the occiput.

I have not been able to obtain any decided information respecting the portion of Australia from which this bird was obtained, but the eastern and northern coasts may be regarded as its most likely habitat; and I am unable to render any account of its habits, or the situations it frequents: several of the members of the group, however, particularly the other Australian species (*Pitta Strepitans*), are known to prefer the thick brushes near the coast, where it hops about and scratches up the leaves, etc., in search of food. The *Pitta brachyura* is also said to perch on the topmost branches of decayed trees, and to resort to the sides of inland streams and waters, where it sports among the shallows, frequently wading up to its knees, which aquatic habits are indicated by the general character of its plumage; and as the present bird is very nearly allied to that species, it has doubtless similar habits.

Messrs. Vigors and Horsfield having omitted to notice the distinctive characters of this species, while engaged upon their elaborate Catalogue of the Australian Birds in the Linnean Society's collection, I have much pleasure in dedicating it to the memory of the late Mr. Vigors, whose high scientific attainments, especially in Ornithology, are so well known, that my testimony is unnecessary.

Crown of the head, ear-coverts, and back of the neck jet-black; a narrow stripe of greenish grey commences at the nostrils, passes over each eye, surrounds the crown, and nearly unites at the occiput; back, scapularies, outer edges of the secondaries, and the greater wing-coverts bronzy green; shoulders, rump, and upper tail-coverts fine lazuline blue; throat white; chest, flanks, and thighs tawny buff; centre of the abdomen dark blood-red, passing into scarlet on the under tail-coverts; primaries black, with a white bar across the centre of the third, fourth, fifth and sixth; tail black, tipped with green; bill dark brown; legs flesh-colour.

The figure is of the natural size.



PITTA IRIS, *Gould.*

Rainbow Pitta.

Pitta Iris, Gould in Proc. of Zool. Soc., February 8, 1842.

Two specimens of this new and beautiful *Pitta*, both killed on the north coast of Australia, have already come under my notice. One of these is in the collection of Dr. Bankier, Acting Surgeon of H.M.S. Pelorus, and the other, apparently a female, is in the British Museum, having been lately presented to the national collection with many other fine birds, by Captain Chambers, R.N., of the same vessel.

The Rainbow Pitta differs so much from all other known species of this lovely tribe of birds, as to render a comparison quite unnecessary. By its discovery we can now enumerate three species from Australia. How rapidly is this fine country unfolding her rich treasures, of which, indeed, sufficient have been seen to rank her second to none in the interest of her productions !

Both the specimens above mentioned are from the Cobourg Peninsula, where the species is not uncommon, and it will doubtless, hereafter, be found to range over a great portion of the north coast. No further account of the habits of this fine bird have been received than that it inhabits the thick "cane-beds" near the coast, through which it runs with great facility ; the boldness and richness of its markings render it a most attractive object in the bush.

Head, neck, breast, abdomen, flanks and thighs deep velvety black ; over the eye, extending to the occiput, a band of ferruginous brown ; upper surface and wings golden green ; shoulders bright metallic cærulean blue, bordered below with lazuline blue ; primaries black, passing into olive-brown at their tips, the third, fourth, fifth and sixth having a spot about the centre of the feather ; tail black at the base, green at the tip, the former colour running on the inner web nearly to the tip ; rump-feathers tinged with cærulean blue ; lower part of the abdomen and under tail-coverts bright scarlet, separated from the black of the abdomen by yellowish brown ; irides dark brown ; bill black ; feet flesh-colour.

The figures are of the natural size.



CINCLOSOMA PUNCTATUM, *Vig. and Horsf.*

Spotted Ground-Thrush.

Turdus Punctatus, Lath. Ind. Orn. Supp., p. xliv.

Punctated Thrush, Lath. Gen. Syn. Supp., vol. ii. p. 187.—Ib. Gen. Hist., vol. v. p. 130.—Shaw, Zool. New Holl., p. 25.—Ib. Gen. Zool., vol. x. p. 202.

Cinclosoma Punctatum, Vig. and Horsf. in Linn. Trans., vol. xv. p. 220.—Griff. An. King., vol. vi. p. 529. pl. 29.

This species has been long known to ornithologists, being one of the birds earliest described from Australia; still little or no information has hitherto been acquired respecting its habits and economy, which, however, are extremely interesting.

It is everywhere a stationary species, and enjoys an extensive range of habitat, being distributed over the whole of Van Diemen's Land and the eastern portion of Australia, from Moreton Bay to Spencer's Gulf, to the westward of which I have never been able to trace it, and I have therefore reason to believe that this is the limit of its range in that direction; its place appearing to be supplied in Western Australia by the species represented in the succeeding Plate. During my researches in South Australia, I found both species sparingly dispersed over the country, in such localities as are suitable to their habits, between the great bend of the Murray and Lake Alexandrina; this, therefore, would seem to be the border-line of their range on either hand; how far these species are spread to the northward, is yet to be determined.

The Spotted Ground-Thrush gives a decided preference to the summits of low stony hills and rocky gullies, particularly those covered with scrubs and grasses. Its flight is very limited, and this power is rarely employed, except for the purpose of crossing a gully or passing to a neighbouring scrub; it readily eludes pursuit by the facility with which it runs over the stony surface and conceals itself among the underwood. When suddenly flushed it rises with a loud burring noise, like the Quail or Partridge. Its short flight is performed by a succession of undulations, and is terminated by the bird pitching abruptly to the ground almost at right angles.

It seldom perches on the smaller branches of trees, but may be frequently seen to run along the fallen trunks so common in the Australian forests.

Unlike many others of the Thrush family which are celebrated for their song, the note of this species merely consists of a low piping whistle, frequently repeated while among the underwood, and by which its presence is often indicated.

In Hobart Town it is frequently exposed for sale in the markets with Bronzewing Pigeons and Wattle-birds, where it is known by the name of Ground-Dove, an appellation which has doubtless been given both from its habit of running and feeding upon the ground like the Pigeons, and the circumstance of its flesh being very delicate eating; to its excellence in this respect I can bear testimony. The pectoral muscles are very largely developed, and the body, when plucked, has much the contour of a Quail.

The duty of incubation is performed in October and the three following months, during which period two and often three broods are produced. The nest is a slight and rather careless structure, composed of leaves and the inner bark of trees, and is of a round open form; it is always placed on the ground, under the shelter of a large stone, stump of a tree, or a tuft of grass. The eggs are two, and sometimes three, in number, one inch and three lines long, and are white, blotched with large marks of olive-brown, particularly at the larger end, some of the spots appearing as if on the inner surface of the shell. The young, which at two days old are thickly clothed with long black down, like the young of the genus *Rallus*, soon acquire the power of running, and at an early age assume the plumage of the adult, after which they are subject to no periodical change in their appearance. The stomach is very muscular, and in those dissected were found the remains of seeds and caterpillars mingled with sand.

Adult males have the forehead and chest ash-grey; crown of the head, back, rump, and the middle tail-feathers rufous-brown, each feather of the back having a broad longitudinal stripe of black down the centre; shoulders and wing-coverts steel-black, each feather having a spot of white at the extreme tip; primaries blackish-brown, margined on their outer edges with lighter brown; throat and a narrow band across the chest steel-black; stripe over the eye, a nearly circular spot on the side of the neck, and the centre of the abdomen white; flanks and under tail-coverts reddish-buff, with a large oblong stripe of black down the centre of each feather; lateral tail-feathers black, broadly margined with grey on their inner webs, and largely tipped with white; bill black; legs fleshy-white; feet darker; eyes very dark lead colour, with a naked blackish-brown eyelash. The female differs from the male in having all the upper surface of a lighter hue; the throat greyish-white instead of black; the spot on the neck rufous instead of white, and in being destitute of the black pectoral band.

The figures are of the natural size.



CINCLOSOMA CASTANOTUS, *Gould.*

Chestnut-backed Ground-Thrush.

Cinclosoma castanotus, Gould, Proc. of Zool. Soc., September 8, 1840.

Booné-Yung, Aborigines of the mountain districts of Western Australia.

THIS new species of *Cinclosoma* appears to be as much confined to the southern and western portions of Australia as the preceding species is to the eastern. It inhabits various parts of the great scrub bordering the Murray above Lake Alexandrina, and I have ascertained that it is also found in the neighbourhood of Swan River.

The economy of the present bird closely resembles that of the Spotted Ground-Thrush, as the similarity of their form would naturally lead us to expect; but the more level plains, particularly those that are studded with clumps of dwarf trees and scrubs, would appear to be the situations for which it is more peculiarly adapted, at least such was the character of the country in the Belts of the Murray where I discovered it. On the other hand, it is stated in the notes accompanying specimens received from Swan River, that "it is rarely seen in any but the most barren and rocky places. The white gum forests, here and there studded with small patches of scrub, are its favourite haunts. It is only found in the interior; the part nearest to the coast, where it has been observed, being Bank's Hutts on the York Road about fifty-three miles from Fremantle."

Its disposition is naturally shy and wary, a circumstance which cannot be attributed to any dread of man as an enemy, since it inhabits parts scarcely ever visited either by the natives or Europeans. Few persons, I may safely say, had ever discharged a gun in that rich arboretum, the Belts of the Murray, before the period of my being there; still the bird was so difficult of approach, that it required the utmost exertion to procure any number of specimens. They were generally observed in small troops of four or six in number, running through the scrub one after another in a line, and resorting to a short low flight, when crossing the small intervening plains. The facility with which it runs over the surface of the ground is even greater than in its near ally, and on examination the toes will be found shorter than in that species, and admirably suited to its terrestrial habits: although it doubtless possesses the power of perching, I do not recollect having ever seen it on a tree.

In its mode of flight and nidification it assimilates so closely to the Spotted Ground-Thrush, as to render a separate description superfluous.

The stomach is extremely muscular, and the food consists of seeds and the smaller kind of *Coleoptera*.

The male has the crown of the head, ear-coverts, back of the neck, upper part of the back, upper tail-coverts and two central tail-feathers brown; stripe over the eye, and another from the base of the lower mandible down the side of the neck white; scapularies and lower part of the back rich chestnut; shoulders and wing-coverts black, each feather having a spot of white at the tip; primaries and secondaries dark brown, margined with lighter brown; lateral tail-feathers black, largely tipped with white; chin, throat and centre of the breast steel black; sides of the chest and flanks brownish grey, the latter blotched with black; centre of the abdomen and under tail-coverts white; bill black; base of the under mandible lead colour; irides reddish hazel; legs blackish brown. The female differs in having the whole of the plumage much lighter, and with only a slight tinge of chestnut on the rump; the stripes of white over the eye and down the sides of the neck less distinctly marked; the chin, throat and breast grey instead of black; the irides hazel, and the feet leaden brown.

The figures are of the natural size.



CINCLOSOMA CINNAMOMEUS, *Gould.*

Cinnamon-coloured Cinclosoma.

Cinclosoma cinnamomeus, Gould in Proc. of Zool. Soc., Part XIV. p. 68.

WE are indebted to the researches of that enterprising traveller Captain Sturt for our knowledge of this new *Cinclosoma*, which is the more interesting as forming an additional species of a singular group of Ground-Thrushes peculiar to Australia, of which only two were previously known. The specimen from which my figure is taken now forms part of the collection at the British Museum, and we learn from Captain Sturt that it was the only one procured during his lengthened sojourn at the Dépôt in that sterile and inhospitable country, the interior of Australia.

It is considerably smaller than either of its congeners, the *C. castanotus* and *C. punctatum*, and, moreover, differs from them in the cinnamon colouring of the greater portion of its plumage.

The whole of the upper surface, scapularies, two central tail-feathers, sides of the breast and flanks cinnamon-brown; wing-coverts jet-black, each feather largely tipped with white; above the eye a faint stripe of white; lores and throat glossy black, with a large oval patch of white seated within the black, beneath the eye; under surface white, with a large arrow-shaped patch of glossy black on the breast; feathers on the sides of the abdomen with a broad stripe of black down the centre; lateral tail-feathers jet-black, largely tipped with pure white; under tail-coverts black for four-fifths of their length on the outer web, their inner webs and tips white; eyes brown; tarsi olive; toes black.

The accompanying Plate represents the bird in two positions of the natural size.



OREOCINCLA LUNULATA.

Mountain Thrush.

Turdus lunulatus, Lath. Ind. Orn. Supp., p. xlii.

Philedon, Temm. Man. d'Orn., 2nd Edit. tom. i. p. lxxxvii.

Lunulated Thrush, Lath. Gen. Syn. Supp., vol. ii. p. 184.

——— *Honey-eater*, Lath. Gen. Hist., vol. iv. p. 180.

Turdus varius, Vig. and Horsf. in Linn. Trans., vol. xv. p. 218.

Oreocincla Novæ-Hollandiæ et *O. macrorhyncha*, Gould in Proc. of Zool. Soc., Part V. p. 145 ; and in Syn. Birds of Australia, Part IV.

Mountain Thrush, Colonists of Van Diemen's Land.

In all localities suitable to its habits and mode of life this species is tolerably abundant, both in Van Diemen's Land and in New South Wales ; it has also been observed in South Australia, where however it is rare. From what I saw of it personally, I am led to infer that it gives a decided preference to thick mountain forests, where large boulder stones frequently occur covered with green moss and lichens, particularly if there be much humidity ; rocky gulleys and the sides of water-courses are also among its favourite places of resort. In Van Diemen's Land, the slopes of Mount Wellington and other similar bold elevations are situations in which it may always be seen if closely looked for. During the summer it ascends high up the mountain sides, but in winter it descends to the lower districts, the outskirts of the forests, and occasionally visits the gardens of the settlers. In New South Wales, the Cedar Brushes of the Liverpool range and all similar situations are frequented by it ; I also observed it on the islands at the mouth of the Hunter ; and I possess specimens from the north shore near Sydney and the banks of the Clarence. Its chief food is Helices and other mollusks, to which insects of many kinds are added ; most likely fruits and berries occasionally form a part of its diet. It is a solitary species, more than two being rarely observed together, and frequently a single individual only is to be seen, noiselessly hopping over the rugged ground in search of food. Its powers of flight are seldom exercised, and so far as I am aware it has no song. Considerable variation exists in the size and in the colouring of individuals from different districts. The Van Diemen's Land specimens are larger, and have the bill more robust, than those from New South Wales ; considerable difference also exists in the lunations at the tip of the feathers, some being much darker and more distinctly defined than others. The young assume the plumage of the adults from the nest, but have the lunations paler and the centre of the feathers of the back bright tawny instead of olive-brown.

The Mountain Thrush breeds in all the localities above-mentioned during the months of August, September and October, the nest being placed on the low branches of the trees, often within reach of the hand ; those I saw were outwardly formed of green moss and lined with fine crooked black fibrous roots, and were about seven inches in diameter by three inches in depth ; the eggs, which are two in number, are of a buffy white or stone-colour, minutely freckled all over with reddish brown, about one inch and three-eighths long by seven-eighths broad.

The sexes are alike in plumage, and may be thus described :—

The whole of the upper surface olive-brown, each feather with a lunar-shaped mark of black at the tip ; wings and tail olive-brown, the former fringed with yellowish olive and the outer feather of the latter tipped with white ; under surface white, stained with buff on the breast and flanks, each feather, with the exception of those of the centre of the abdomen and the under tail-coverts, with a lunar-shaped mark of black at the tip, narrow on the breast and abdomen and broad on the sides and flanks ; irides very dark brown ; bill horn-colour, becoming yellow on the base of the lower mandible ; feet horn-colour.

The figures are of the natural size.





CHLAMYDERA MACULATA, *Gould.*

Spotted Bower-bird.

Calodera maculata, Gould in Proc. of Zool. Soc., Part IV. p. 106, and Syn. Birds of Australia, Part I.

Chlamydera maculata, Gould, Birds of Australia, 1837, Part I. cancelled.

THIS species, which is nearly allied to the Satin Bower-bird, is especially interesting, as being the constructor of a bower even more extraordinary than that of the latter, and in which the decorative propensity is carried to a far greater extent. It is as exclusively an inhabitant of the interior of the country as the Satin Bower-bird is of the brushes between the mountain ranges and the coast; and though in all probability it has a wide range over the central portions of the Australian continent, the only parts in which I have observed it, or from which I have ever seen specimens, are the districts immediately to the north of the colony of New South Wales. During my journey into the interior I observed it to be tolerably abundant at Brezi on the river Mokaï to the northward of the Liverpool Plains: it is also equally numerous in all the low scrubby ranges in the neighbourhood of the Namoi, as well as in the open brushes which intersect the plains on its borders; still, from the extreme shyness of its disposition, the bird is seldom seen by ordinary travellers, and it must be under very peculiar circumstances that it can be approached sufficiently close to observe its colours. It has a harsh, grating, scolding note, which is generally uttered when its haunts are intruded on, and by which means its presence is detected when it would otherwise escape observation: when disturbed it takes to the topmost branches of the loftiest trees, and frequently flies off to another neighbourhood. I found the readiest way of obtaining specimens was by watching at the water-holes where they come to drink; and on one occasion, near the termination of a long drought, I was guided by a native to a deep basin in a rock, which still held water from the rains of many months before, and where numbers of these birds, as well as Honeysuckers and Parrots, were constantly assembling throughout the day. This natural reservoir had probably been but seldom, if ever, visited by the white man, being situated in a remote mountain, and presenting no attraction to any person but a naturalist. My presence was evidently regarded with suspicion by the visitants to the spot; but while I remained lying on the ground perfectly motionless, though close to the water, their thirst overpowering their fear, they would dash down past me and eagerly take their fill, although an enormous black snake was lying coiled upon a piece of wood near the edge of the pool. Of the numerous assemblage here congregated the Spotted Bower-birds were by far the shyest of the whole, yet six or eight of these, displaying their beautiful necks, were often perched within a few feet of me. The scanty supply of water remaining in the cavity must soon have been exhausted by the thousands of birds that daily resorted to it, had not the rains, so long withheld, soon afterwards descended in torrents, filling every water-course and overflowing the banks of the largest rivers: I remained at this, to me, interesting spot for three days.

In many of its actions and in the greater part of its economy much similarity exists between this species and the Satin Bower-bird, particularly in the curious habit of constructing an artificial bower or playing-ground. I was so far fortunate as to discover several of these bowers during my journey to the interior, the finest of which I succeeded in bringing to England, and it is now in the British Museum. The situations of these runs or bowers are much varied: I found them both on the plains studded with Myalls (*Acacia pendula*) and other small trees, and in the brushes clothing the lower hills. They are considerably longer and more avenue-like than those of the Satin Bower-bird, being in many instances three feet in length. They are outwardly built of twigs, and beautifully lined with tall grasses, so disposed that their heads nearly meet: the decorations are very profuse, and consist of bivalve shells, crania of small mammalia and other bones. Evident and beautiful indications of design are manifest throughout the whole of the bower and decorations formed by this species, particularly in the manner in which the stones are placed within the bower, apparently to keep the grasses with which it is lined fixed firmly in their places: these stones diverge from the mouth of the run on each side so as to form little paths, while the immense collection of decorative materials, bones, shells, &c., are placed in a heap before the entrance of the avenue, this arrangement being the same at both ends. In some of the larger bowers, which had evidently been resorted to for many years, I have seen nearly half a bushel of bones, shells, &c., at each of the entrances. In some instances small bowers, composed almost entirely of grasses, apparently the commencement of a new place of rendezvous,

were observable. I frequently found these structures at a considerable distance from the rivers, from the borders of which they could alone have procured the shells and small round pebbly stones; their collection and transportation must therefore be a task of great labour and difficulty. As these birds feed almost entirely upon seeds and fruits, the shells and bones cannot have been collected for any other purpose than ornament; besides, it is only those that have been bleached perfectly white in the sun, or such as have been roasted by the natives, and by this means whitened, that attract their attention. I fully ascertained that these runs, like those of the Satin Bower-bird, formed the rendezvous of many individuals; for, after secreting myself for a short space of time near one of them, I killed two males which I had previously seen running through the avenue.

Crown of the head, ear-coverts and throat rich brown, each feather surrounded with a narrow line of black; feathers on the crown small, and tipped with silvery grey; a beautiful band of elongated feathers of light rose-pink crosses the back of the neck, forming a broad, fan-like, occipital crest; all the upper surface, wings and tail of a deep brown; every feather of the back, rump, scapularies and secondaries tipped with a large round spot of rich buff; primaries slightly tipped with white; all the tail-feathers terminated with buffy white; under surface greyish white; feathers of the flanks marked with faint, transverse, zigzag lines of light brown; bill and feet dusky brown; irides dark brown; bare skin at the corner of the mouth thick, fleshy, prominent, and of a pinky flesh-colour.

Both sexes, when fully adult, are adorned with the rose-coloured frill; but the young birds of the year, both male and female, are without it.

The Plate represents the bower, with two birds, a male and a female, all of the natural size.



CHLAMYDERA NUCHALIS.

Great Bower-bird.

Ptilonorhynchus nuchalis, Jard. and Selb. Ill. Orn., vol. ii. pl. 103.

Calodera nuchalis, Gould, Syn. Birds of Australia, Part I.

Chlamydera nuchalis, Gould, Birds of Australia, 1837, Part I. cancelled.—G. R. Gray, List of Gen. of Birds, p. 40.

THIS fine species was first described and figured in the "Illustrations of Ornithology," by Sir William Jardine and Mr. Selby, from the then unique specimens in the collection of the Linnean Society; but neither the part of Australia of which it is a native or any particulars relative to its habits were known to those gentlemen, nor have I myself had an opportunity of observing it in a state of nature, the bird being an inhabitant of the north-west coast, a portion of the Australian continent that has, as yet, been but little visited. I am indebted for individuals of both sexes of this bird to two of the officers of the "Beagle," Messrs. Bynoe and Dring; but neither of these gentlemen furnished me with any account of its economy. Captain Grey, however, on his return from his expedition to those regions, informed me that he frequently found during his rambles a most singular bower, made in every way like that of the *Chlamydera maculata*, and which was always an object of great interest to him, being unable to satisfy himself as to what animal had constructed it, or even whether it was the work of a bird or of a quadruped: he was inclined to suppose the latter, but I think there need not be the slightest hesitation in ascribing its formation to the *Chlamydera nuchalis*; for we may reasonably expect that a species so very closely allied to that of the southern and eastern portions of the continent would partake of its peculiar habits and economy. The following notes were written on the spot, and were kindly given to me by Captain Grey:—

"These bowers were formed of dead grass and parts of bushes, sunk a slight depth into two parallel furrows, in sandy soil, and were nicely arched above; but the most remarkable fact connected with them was, that they were always full of broken sea-shells, large heaps of which also protruded from each extremity of the bower. In one of these bowers, the most remote from the sea that we discovered, were found a heap of the stones of some fruit which had evidently been rolled in the sea. I never saw any animal in or near to these bowers, but the dung of a small species of Kangaroo was always abundant close to them, which induced me to suppose them to be the work of some kind of quadruped."

The circumstance of Captain Grey, never having perceived the birds near the runs, serves to show that it exhibits the same shyness of disposition as the other species.

Head and all the upper surface greyish brown, the feathers of the former with a shining or satiny lustre; the feathers of the back, wing-coverts, scapulars, quills and tail tipped with greyish white; on the nape of the neck a beautiful rose-pink fascia, consisting of narrow feathers, partly encircled by a ruff of satin-like plumes, the tips distinct, rounded, and turning inwards; under surface yellowish grey, the flanks tinged with brown; irides, bill and legs brownish black.

In one of the specimens I possess, and which formed the subject of the upper figure in the Plate, no trace of the nuchal ornament is observable, a circumstance I conceive to be indicative of youth rather than a distinguishing characteristic of the sexes, since in the other species I find the mark common to both, but the young bird of the year without any trace of it.

The Plate represents a male and a young bird, of the natural size.





PTILONORHYNCHUS HOLOSERICEUS, *Kuhl.*

Satin Bower-bird.

- Ptilonorhynchus holosericeus*, Kuhl, Beytr. zur Zool. S. 150.—Wagl. Syst. Av. sp. 1.—G. R. Gray, Gen. of Birds, p. 40.—Swains. Class. of Birds, vol. ii. p. 271.
Pyrrhocorax violaceus, Vieill. Nouv. Diet. d'Hist. Nat., tom. vi. p. 569.—Ib. Ency. Méth. 1823, p. 896.
Kitta holosericea, Temm. Pl. Col. 395 and 422.—Less. Traité d'Orn., p. 350, pl. 46. fig. 1.
Satin Grackle, Lath. Gen. Hist., vol. iii. p. 171.
Ptilonorhynchus MacLeayi, Lath. MSS., Vig. and Horsf. in Linn. Trans., vol. xv. p. 263.
Corvus squamulosus, Ill., female or young?
Ptilonorhynchus squamulosus, Wagl. Syst. Av. sp. 2, female or young?
Satin Bird, of the Colonists of New South Wales.
Cowry, of the Aborigines of the coast of New South Wales.
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ALTHOUGH this species has been long known to ornithologists, and is familiar to the colonists of New South Wales, its habits, which in many respects are most extraordinary, have hitherto escaped attention; or if not entirely so, have never been brought before the scientific world. It is, therefore, a source of high gratification to myself to be the first to place them on record.

One point to which I more particularly allude,—a point of no ordinary interest, both to the naturalist and the general admirer of nature,—is the formation of a bower-like structure by this bird for the purpose of a playing-ground or hall of assembly, a circumstance in its economy which adds another to the many anomalies connected with the Fauna of Australia.

The localities favourable to the habits of the Satin Bower-bird are the luxuriant and thickly-foliaged brushes stretching along the coast from Port Philip to Moreton Bay, the cedar-brushes of the Liverpool range, and most of the gullies of the great mountain-chain separating the colony from the interior. So far as is at present known, it is restricted to New South Wales; certainly it is not found so far to the westward as South Australia, and I am not aware of its having been seen on the north coast; but its range in that direction can only be determined by future research.

It is a stationary species, but appears to range from one part of a district to another, either for the purpose of varying the nature, or of obtaining a more abundant supply of food. Judging from the contents of the stomachs of the many specimens I dissected, it would seem that it is altogether granivorous and frugivorous, or if not exclusively so, that insects form but a small portion of its diet. Independently of numerous berry-bearing plants and shrubs, the brushes it inhabits are studded with enormous fig-trees, some of them towering to the height of two hundred feet; among the lofty branches of these giants of the forest, the Satin Bower-bird and several species of Pigeons find in the small wild fig, with which the branches are loaded, an abundant supply of a favourite food: this species also commits considerable depredation on any ripening corn near the localities it frequents. It appears to have particular times in the day for feeding, and when thus engaged among the low shrub-like trees, I have approached within a few feet without creating alarm; but at other times I have found this bird extremely shy and watchful, especially the old males, which not unfrequently perch on the topmost branch or dead limb of the loftiest tree in the forest, whence they can survey all round, and watch the movements of the females and young in the brush below.

In the autumn they associate in small flocks, and may often be seen on the ground near the sides of rivers, particularly where the brush descends in a steep bank to the water's edge.

Besides the loud liquid call peculiar to the male, both sexes frequently utter a harsh, unpleasant, guttural note indicative of surprise or displeasure. The old black males are exceedingly few in number, as compared with the females and young male birds in the green dress, from which and other circumstances I am led to believe that at least two, if not three years, elapse before they attain the rich satin-like plumage, which, when once perfectly assumed, is, I believe, never again thrown off.

I regret to state, that although I used my utmost endeavours, I could never discover the nest and eggs of this species, neither could I obtain any authentic information respecting them, either from the natives or the colonists, of whom I made frequent inquiries.

The extraordinary bower-like structure, alluded to above, first came under my notice at Sydney, to the Museum of which place an example had been presented by Mr. Charles Coxen, as the work of the Satin Bower-bird. I at once determined to leave no means untried for ascertaining every particular relating to this peculiar feature in the bird's economy, and on visiting the cedar-brushes of the Liverpool range I discovered several of these bowers or playing-places; and a glance at the accompanying illustration will, I presume, give a more correct idea of the nature of these erections than the most minute description. They are usually placed under the shelter of the branches of some overhanging tree in the most retired part of the forest: they differ considerably in size, some being a third larger than the one here represented, while others are much smaller. The base consists of an extensive and rather convex platform of sticks firmly interwoven, on the centre of which the bower itself is built: this, like the platform on which it is placed and with which it is interwoven, is formed of sticks and twigs, but of a more slender and flexible descrip-

tion, the tips of the twigs being so arranged as to curve inwards and nearly meet at the top: in the interior of the bower the materials are so placed that the forks of the twigs are always presented outwards, by which arrangement not the slightest obstruction is offered to the passage of the birds. The interest of this curious bower is much enhanced by the manner in which it is decorated at and near the entrance with the most gaily-coloured articles that can be collected, such as the blue tail-feathers of the Rose-hill and Pennantian Parrots, bleached bones, the shells of snails, &c.; some of the feathers are stuck in among the twigs, while others with the bones and shells are strewn about near the entrances. The propensity of these birds to pick up and fly off with any attractive object, is so well known to the natives, that they always search the runs for any small missing article, as the bowl of a pipe, &c., that may have been accidentally dropped in the brush. I myself found at the entrance of one of them a small neatly-worked stone tomahawk, of an inch and a half in length, together with some slips of blue cotton rags, which the birds had doubtless picked up at a deserted encampment of the natives.

For what purpose these curious bowers are made, is not yet, perhaps, fully understood; they are certainly not used as a nest, but as a place of resort for many individuals of both sexes, which, when there assembled, run through and around the bower in a sportive and playful manner, and that so frequently that it is seldom entirely deserted.

The proceedings of these birds have not been sufficiently watched, to render it certain whether the runs are frequented throughout the whole year or not; but it is highly probable that they are merely resorted to as a rendezvous, or playing-ground, at the pairing time and during the period of incubation. It was at this season, as I judged from the state of the plumage and from the internal indications of those I dissected, that I visited these localities; the bowers I found had been recently renewed; it was however evident, from the appearance of a portion of the accumulated mass of sticks, &c., that the same spot had been used as a place of resort for many years. Mr. Charles Coxen informed me, that, after having destroyed one of these bowers and secreted himself, he had the satisfaction of seeing it partially reconstructed; the birds engaged in this task, he added, were females. With much care and trouble I succeeded in bringing to England two fine specimens of these bowers, one of which I presented to the British Museum, and the other to the collection at Leyden, where they may be seen by all those who take an interest in the subject.

It will be observed, that the two following nearly allied species, *Chlamydera maculata* and *Chlam. nuchalis*, also build similar erections, and that in them the decorative propensity is carried to a much greater extent than in the Satin Bower-bird.

The adult male has the whole of the plumage of a deep shining blue-black, closely resembling satin, with the exception of the primary wing-feathers, which are of a deep velvety black, and the wing-coverts, secondaries and tail-feathers, which are also of a velvety black, tipped with the shining blue-black lustre; irides beautiful light blue with a circle of red round the pupil; bill bluish horn, passing into yellow at the tip; legs and feet yellowish white.

The female has the head and all the upper surface greyish green; wings and tail dark sulphur-brown, the inner webs of the primaries being the darkest; under surface containing the same tints as the upper, but very much lighter, and with a wash of yellow; each feather of the under surface also has a crescent-shaped mark of dark brown near the extremity, giving the whole a scaly appearance; irides of a deeper blue than in the male, and with only an indication of the red ring; bill dark horn-colour; feet yellowish white tinged with olive.

Young males closely resemble the females, but differ in having the under surface of a more greenish yellow hue, and the crescent-shaped markings more numerous; irides dark blue; feet olive brown; bill blackish olive.

The Plate represents the bower, an old male, female, and two young males; one in the green dress and the other in a state of change, all about a fifth less than the natural size.



*Leys to look at
and study*

PTILONORHYNCHUS SMITHII, *Vig. and Horsf.*

Cat Bird.

Varied Roller, Lath. Gen. Hist., vol. iii. p. 86.

Ptilonorhynchus Smithii, Lath. MSS. Vig. and Horsf. in Linn. Trans., vol. xv. p. 264.

————— *viridis*, Wagl. Syst. Av., sp. 3.

Kitta virescens, Temm. Pl. Col., 396.

Cat Bird of the Colonists of New South Wales.

So far as our knowledge extends, this fine species is only found in New South Wales, where it inhabits all those luxuriant forests that extend along the eastern coast between the mountain ranges and the sea ; those of Illawarra, the Hunter, the MacLeay, and the Clarence and the cedar brushes of the Liverpool range being, among many others, localities in which it may always be found : situations suitable to the Regent and Satin Birds are equally adapted to the habits of the Cat Bird, and I have not unfrequently seen them all three feeding together on the same tree, when the branches bore a thick crop of berries and fruits. The wild fig, and the native cherry, when in season, afford it an abundant supply. So rarely do they take insects, that I do not recollect ever finding any remains in the stomachs of those specimens I dissected. In its disposition it is neither a shy nor a wary bird, little caution being required to approach it, either when feeding or while quietly perched upon the lofty branches of the trees. It is at such times that its loud, harsh and extraordinary note is heard ; a note which differs so much from that of all other birds, that having been once heard it can never be mistaken. In comparing it to the nightly concerts of the domestic cat, I conceive that I am conveying to my readers a more perfect idea of the note of this species than could be given by pages of description. This concert, like that of the animal whose name it bears, is performed either by a pair or several individuals, and nothing more is required than for the hearer to shut his eyes from the neighbouring foliage to fancy himself surrounded by London grimalkins of house-top celebrity.

While in the district in which this bird is found, my almost undivided attention was directed to the acquisition of all the information I could obtain respecting its habits, as I considered it very probable that it might construct a bower similar to that of the Satin Bird ; but I could not satisfy myself that it does, nor could I discover its nest, or the situation in which it breeds ; it is doubtless, however, among the branches of the trees of the forest in which it lives. It certainly is not a migratory bird, although it may range from one portion of the brushes to another, according as the supply of food may be more or less abundant.

The sexes do not offer the slightest difference in plumage, or any external character by which the male may be distinguished from the female ; she is, however, rather less brilliant in her markings, and somewhat smaller in size.

Head and back of the neck olive-green, with a narrow line of white down each of the feathers of the latter ; back, wings and tail grass-green, with a tinge of blue on the margins of the back-feathers ; the wing-coverts and secondaries with a spot of white at the extremity of their outer web ; primaries black, their external webs grass-green at the base and bluish green for the remainder of their length ; all but the two central tail-feathers tipped with white ; all the under surface yellowish green, with a spatulate mark of yellowish white down the centre of each feather ; bill light horn-colour ; irides brownish red ; feet whitish.

The Plate represents the two sexes of the natural size.



SERICULUS CHRYSOCEPHALUS.

Regent Bird.

Meliphaga chrysocephala, Lewin, Birds of New Holl., pl. 1.

Golden-crowned Honey-eater, Lath. Gen. Hist., vol. iv. p. 184.

Oriolus regens, Temm. Pl. Col., 320.—Quoy et Gaim. Zool. de l'Uranie, pl. 22.—Less. Zool. de Coquille, pl. 20 (female).

Sericulus chrysocephalus, Swains. in Zool. Journ., vol. i. p. 478.—Vig. and Horsf. in Linn. Trans., vol. xv. p. 326.

—Jard. and Selb. Ill. Orn., vol. i. pls. 18, 19, 20.—G. R. Gray, List of Gen. of Birds, 2nd edit., p. 38.

—Swains. Class. of Birds, vol. ii. p. 237.—Less. Traité d'Orn., p. 340.—Steph. Cont. of Shaw's Gen. Zool., vol. xiv. p. 266.

Sericulus regens, Less. Man. d'Orn., tom. i. p. 256.

THIS beautiful species, one of the finest birds of the Australian Fauna, is, I believe, exclusively confined to the eastern portion of the country; it is occasionally seen in the neighbourhood of Sydney, which appears to be the extent of its range to the southward and westward. I met with it in the brushes at Maitland in company and feeding on the same trees with the Satin and Cat Birds and the *Oriolus viridis*; it is still more abundant on the Manning, at Port Macquarrie, and at Moreton Bay; I sought for and made every inquiry respecting it at Illawarra, but did not encounter it, and was informed that it is never seen there, yet the district is precisely similar in character to those in which it is abundant about two degrees to the eastward: while encamped on Mosquito Island, near the mouth of the river Hunter, I shot several, and observed it to be numerous on the neighbouring islands, particularly Baker's Island, where there is a fine garden, and where it is one of the greatest pests the proprietor has to contend with; for during the summer months, when the peaches and other fruits are ripening, it commits serious injury to the crops and their owner.

Although I have spoken of this bird as abundant in the various localities referred to, I must mention that at least fifty out of colour may be observed to one fully-plumaged male, which when adorned in its gorgeous livery of golden yellow and deep velvety black exhibits an extreme shyness of disposition, as if conscious that its beauty, rendering it a conspicuous object, might lead to its destruction; it is usually therefore very quiet in its actions, and mostly resorts to the topmost branches of the trees; but when two gay-coloured males encounter each other, frequent conflicts take place. To obtain specimens in their full dress, considerable caution is necessary; on the other hand, females and immature males are very tame, and when feeding among the foliage, appear to be so intent upon their occupation as not to heed the approach of an intruder; and I have occasionally stood beneath a low tree, not more than fifteen feet high, with at least ten feeding voraciously above me. The stomachs of those dissected contained the remains of wild figs, berries and seeds, but no trace of insects.

I did not succeed in discovering the nest, or in obtaining any information respecting it.

I believe that the fine plumage represented in the Plate is not assumed until the second or third year, and when once acquired is not afterwards thrown off; it may be thus described:—

Head and back of the neck, running in a rounded point towards the breast, rich bright gamboge-yellow tinged with orange, particularly on the centre of the forehead; the remainder of the plumage, with the exception of the secondaries and inner webs of all but the first primary, deep velvety black; the secondaries bright gamboge-yellow, with a narrow edging of black along the inner webs; the first primary is entirely black, the next have the tips and outer webs black—the half of the inner web and that part of the shaft not running through the black tip are yellow; as the primaries approach the secondaries the yellow of the inner web extends across the shaft, leaving only a black edge on the outer web, which gradually narrows until the tips only of both webs remain black; bill yellow; irides pale yellow; legs and feet black.

The female has the head and throat dull brownish white, with a large patch of deep black on the crown; all the upper surface, wings and tail pale olive-brown, the feathers of the back with a triangular-shaped mark of brownish white near the tip; the under surface is similar, but here, except on the breast, the white markings increase so much in size as to become the predominant hue; irides brown; bill and feet black.

The young males at first resemble the females, but their hues are continually changing until they gain the livery of the adult.

The Plate represents a male and a female on a branch of one of the wild figs of the brushes of New South Wales, all the size of life.



ORIOLOUS VIRIDIS.

New South Wales Oriole.

Gracula viridis, Lath. Ind. Orn. Supp., p. xxviii.—Shaw, Gen. Zool., vol. vii. p. 473.

Loriot, Temm. Man. d'Orn., 2nd Edit. p. liv.

Green Grakle, Lath. Gen. Syn. Supp., vol. ii. p. 129.—Ib. Gen. Hist., vol. iii. p. 168.

Coracias sagittata, Lath. Ind. Orn. Supp., p. xxvi.—Shaw, Gen. Zool., vol. viii. p. 400.

Striated Roller, Lath. Gen. Syn. Supp., vol. ii. p. 122.—Ib. Gen. Hist., vol. iii. p. 83.

Streaked Roller, Lath. Gen. Hist., vol. iii. p. 84, young.

Mimetes viridis, King, Survey of Intertropical Coast of Australia, vol. ii. p. 419.

Mimeta viridis, Vig. and Horsf. in Linn. Trans., vol. xv. p. 326.—Jard. and Selb. Ill. Orn., vol. ii. pl. 61.—G. R. Gray, List of Gen. of Birds, 2nd Edit. p. 38.

——— *Meruloides*, Vig. and Horsf. in Linn. Trans., vol. xv. p. 327, young.

Oriolus viridis, Vieill., 2nd Edit. du Nouv. Dict. d'Hist. Nat., tom. xviii. p. 197.—Ib. Ency. Méth. Orn., part ii. p. 697.

——— *variegatus*, Vieill., 2nd Edit. du Nouv. Dict. d'Hist. Nat., tom. xviii. p. 196.—Ib. Ency. Méth. Orn., part ii. p. 696.

This bird was first described by Latham, by whom it was placed in the genus *Gracula*, but it agrees in no respect with the members of that genus, and “in fact,” says Captain King, “the genus *Oriolus* is that to which it bears the closest resemblance in its general appearance. I would at once refer it to that genus, but that I have some reason to think that it belongs to the meliphagous birds. . . . Of the tongue or mode of feeding I can myself say nothing decisively; but general opinion places this bird among the groups that feed by suction, and as I have a second species hitherto undescribed which is closely allied to it, I prefer forming both provisionally into a new genus” (*Mimetes*) “to referring them to one, from which, although they agree with it in external appearance, they may be totally remote in consequence of their internal anatomy and habits of life. If the tongue be found to accord with that of the *Orioles* and not of the *Honey-suckers*, my group of course must fall.” Messrs. Jardine and Selby took the same view of the subject when describing and figuring the bird in their “Illustrations of Ornithology,” and have given a description of the structure of the tongue, which certainly offers a slight resemblance to that of the true meliphagous birds; but my own observations of the bird in a state of nature enable me to affirm that in appearance, habits, economy, and in the nature of its food it is truly an Oriole, to which group of birds it was correctly assigned by M. Vieillot in the second edition of the “Dictionnaire d'Histoire Naturelle,” and that consequently Captain King's generic term *Mimetes* must sink into a synonym of *Oriolus*.

The true and probably the restricted habitat of this species is New South Wales, where in the months of summer it is tolerably plentiful in every part of the colony. I frequently observed it in the Botanic Garden at Sydney, and in all the gardens of the settlers where there were trees of sufficient size to afford it shelter; the brushes of the country, the sides of brooks and all similar situations are equally inhabited by it. I did not find it in South Australia, neither has it been observed to the westward of that part of the country. That its range extends pretty far to the northward I have no doubt, as its numbers rather increased than diminished in the neighbourhood of the rivers Peel and Namoi; and many persons would, I feel assured, assign to it a much more extended range by considering it identical with the bird of the same form found at Port Essington,—an opinion in which I cannot myself coincide, believing as I do that the latter bird is a distinct species, although at a hasty glance it would appear to be one and the same; the general colouring of the two birds is, it is true, very similar, but the following differences exist and are found to be constant:—The Port Essington bird (for which the specific term *affinis* would be an appropriate appellation) is smaller in the body, has a shorter wing, a much larger bill, and the white spots at the tip of the lateral tail-feathers considerably smaller than the bird inhabiting New South Wales; in other respects they are so precisely alike that it will not be necessary to figure both.

The following notes descriptive of their habits and economy are equally applicable to the one and the other.

The bird observed by me in New South Wales was bold and active, and was often seen in company with the Regent, Satin and Cat Birds, feeding in the same trees and on similar berries and fruits, particularly the small wild fig. It possesses a loud pleasing whistling note, which is poured forth while the bird is perched on a lofty branch. I often observed it capturing insects on the wing and flying very high, frequently above the tops of the loftiest trees.

Mr. Gilbert states that the Port Essington bird is “abundant in every part of the peninsula and the

adjacent islands in every possible variety of situation. Its native name is *Mur-re-a-rwoo*. It possesses a very loud and distinct note, unlike that of every other bird I have yet heard; the sound most commonly uttered is a loud clear whistle terminating in a singular guttural harsh catch, but in the cool of the evening, when perched on and sheltered in the thick foliage of one of the topmost branches of a *Eucalyptus*, it pours forth a regular succession of very pleasing notes.

A nest taken on the 4th of December contained two nearly hatched eggs; it was attached by the rim to a drooping branch of the swamp *Melaleuca*, about five feet from the ground; was very deep and large, and formed of very narrow strips of the paper bark mixed with a few small twigs, the bottom of the interior lined with very fine wiry twigs.

The eggs, which are large for the size of the bird, are of a beautiful bluish white, sparingly spotted all over with deep umber-brown and bluish-grey, the latter appearing as if beneath the surface of the shell; their medium length is one inch and three lines long by eleven lines broad.

The sexes when fully adult differ so little in colour that they can scarcely be distinguished; the male is however of a more uniform tint about the head, neck and throat, and has the yellowish olive of the upper surface of a deeper tint than the female.

Head and all the upper surface yellowish olive; wings and tail-feathers dark brown; the outer webs of the coverts and secondaries grey, margined and broadly tipped with white; all but the two centre tail-feathers with a large oval-shaped spot of white on the inner, and the extremity of the outer web white, the white mark gradually increasing in size as the feathers recede from the centre until it becomes an inch long on the external one; under surface white, washed with olive-yellow on the sides of the chest, each feather with an elongated pear-shaped mark of black down the centre; bill dull flesh-red; irides scarlet; feet lead-colour.

The young bird during the first year has the bill blackish brown instead of dull flesh-red; the upper surface olive-brown, each feather strongly streaked down the centre with dark brown; wings brown; under surface of the shoulder and all the wing-feathers except the primaries margined with sandy red; the black streaks on the breast more decided, and the white spot at the tip of the lateral tail-feathers much smaller than in the adult.

The figures represent the two sexes of the natural size on a plant gathered in the brushes of New South Wales, the name of which I have not been able to ascertain.



ORIOLOUS FLAVOCINCTUS.

Crescent-marked Oriole.

Mimetes flavo-cinctus, King, Survey of Intertropical Coasts of Australia, vol. ii. p. 419.—Steph. Cont. of Shaw's Gen. Zool., vol. xiv. p. 351.

Mimeta flavo-cincta, Vig. and Horsf. in Linn. Trans., vol. xv. p. 327.

THIS species was discovered on the north coast of Australia by Captain Philip Parker King, R.N., who described it in his "Survey of the Intertropical Coasts of Australia," referred to above; Mr. Gilbert procured two specimens at Port Essington, and Lieut. Ince, R.N., subsequently obtained an additional example in the same locality. All the information that has reached me respecting its habits and economy is contained in a short note sent to me by Mr. Gilbert, which merely states that his specimens were obtained in the forests of mangroves bordering the coast.

Like the *O. viridis* it is in every respect a true Oriole, although neither of them are so gaily attired as the other members of the genus.

The male has the head, neck and all the upper surface dull greenish yellow, with a stripe of black, broad at the base and tapering to a point, down the centre of each feather; under surface greenish yellow, passing into pure yellow on the under tail-coverts; wings black, all the feathers margined externally with greenish yellow and broadly tipped with pale yellow; tail black, washed on the margins with greenish yellow and largely tipped, except the two middle feathers, with bright yellow, which increases in extent as the feathers recede from the centre; irides reddish orange; bill dull red; feet lead-colour.

The female differs in being of smaller size, in having the under surface striated with black, and the markings of the wings straw-white instead of yellow.

The Plate represents the two sexes of the size of life.



SPHECOTHERES AUSTRALIS, *Swains.*

Australian Sphecotheres.

Sphecotheres viridis, Vig. and Horsf. in Linn. Trans., vol. xv. p. 215.

———— *virescens*, Jard. and Selb. Ill. Orn., vol. ii. pl. 79.

———— *Australis*, Swains.

———— *canicollis*, Swains. Anim. in Menag., p. 320.

I KILLED a fine specimen of this bird on Mosquito Island, at the mouth of the river Hunter, in September 1839 ; it was perched on a dead branch which towered above the green foliage of one of the high trees of the forest, and my attention was drawn to it by its loud and singular note : this was the only example that came under my observation : I am informed that it is more plentiful in the neighbourhood of the river Clarence, and abundant at Moreton Bay, and that it enjoys a wide range is proved by Mr. Bynoe having procured an adult male on the north coast. It appears to be a bird peculiar to the brushes, and its food doubtless consists of the berries and fruits which abound in those districts.

The sexes differ very widely from each other in the colouring of their plumage ; that of the male being in masses, while that of the female is of a striated character.

The male has the crown of the head and the cheeks glossy black ; orbits and a narrow space leading to the nostrils naked and of a light buffy yellow ; throat, chest and collar at the back of the neck dark slate-grey ; all the upper surface, greater wing-coverts, outer webs of the secondaries, abdomen and flanks yellowish green ; lesser wing-coverts, primaries, and inner webs of the secondaries slaty black, fringed with grey ; vent and under tail-coverts white ; tail black, the apical half and the outer web of the external feather pure white ; the apical half of the second feather on each side white, the next on each side with a large spot of white at the extremity, and the six central feathers slightly fringed with white at the tip ; bill black ; irides very dark brown in some, red in others ; feet flesh-colour.

The female has the upper surface brown washed with olive, each feather with a darker centre, assuming on the head the form of striæ, the brown hue passing into yellowish green on the rump and upper tail-coverts ; wings dark brown, the coverts and secondaries conspicuously, and the primaries narrowly, edged with greenish grey ; under surface buffy white, each feather with a broad and conspicuous stripe of brown down the centre ; flanks washed with yellowish green ; under tail-coverts white, with a narrow stripe of brown down the centre ; tail brown, each feather narrowly edged on the inner web with white, and all but the two lateral ones on each side washed with yellowish green ; bill and feet lighter than in the male.

The figures represent a male and a female of the natural size.

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CORCORAX LEUCOPTERUS.

White-winged Chough.

Pyrhocorax leucopterus, Temm. Man. d'Orn., tom. i. p. 121.—Less. Man. d'Orn., tom. i. p. 384.

Fregilus leucopterus, Vig. and Horsf. in Linn. Trans., vol. xv. p. 265.—Less. Man. d'Orn., tom. i. p. 384.

Corcorax Australis, Less. Traité d'Orn., p. 325.

——— *leucopterus*, G. R. Gray, List of Gen. of Birds, 2nd Edit., p. 52.

Waybung, Aborigines of New South Wales.

THIS bird is a stationary species, and appears to be distributed over all parts of New South Wales and South Australia; it is very abundant in the whole of the Upper Hunter district, and I have also killed it in the interior of South Australia; it is usually met with in small troops of from six to ten in number, feeding upon the ground, over which it runs with considerable rapidity; the entire troop keeping together, but one bird running before the other and searching for food with the most scrutinizing care. In disposition it is one of the tamest of the larger birds I ever encountered, readily admitting of a very close approach, and then merely flying off to the low branch of some neighbouring tree. During flight the white marking of the wing shows very conspicuously, and on alighting the bird displays many curious actions, leaping from branch to branch with surprising quickness, at the same time spreading the tail and moving it up and down in a very singular manner; on being disturbed it peeps and pries down upon the intruder below, and generally utters a harsh, grating, disagreeable and tart note; at other times, while perched among the branches of the trees, it makes the woods ring with its peculiar hollow mournful pipe.

During the pairing-season the male becomes very animated, and his manners so remarkable, that it would be necessary for my readers to witness the bird in its native wilds to form a just conception of them: while sitting on the same branch close to the female, he spreads out his wings and tail to the fullest extent, lowers his head, puffs out his feathers and displays himself to the utmost advantage, and when two or more are engaged in these evolutions, the exhibition cannot fail to amuse and delight the spectator. A winged specimen gave me more trouble to catch than any other bird I ever chased; its power of passing over the ground being so great, that it bounded on before me and cleared every obstacle, hillocks and fallen trees, with the utmost facility.

The White-winged Chough is a very early breeder, and generally rears more than one brood in a year, the breeding-season extending over the months of August, September, October and November. The nest is a most conspicuous fabric, composed of mud and straw, resembling a bason, and is usually placed on the horizontal branch of a tree near to or overhanging a brook. The eggs vary from four to seven in number, and are of a yellowish white, boldly blotched all over with olive and purplish brown, the latter tint appearing as if beneath the surface of the shell; they are one inch and a half long by one inch and one line broad.

It has often struck me that more than one female deposited her eggs in the same nest, as four or five females may be frequently seen either on the same or the neighbouring trees, while only one nest is to be found.

The bird generally evinces a preference for open forest land, but during the breeding-season affects the neighbourhood of brooks and lagoons, which may be accounted for by the fact of such situations being necessary to enable it to procure the mud wherewith to build its nest, besides which they also afford it an abundance of insect food.

The whole of the plumage black, with glossy green reflections, with the exception of the inner webs of the primaries, which are white for three parts of their length from the base; irides scarlet; bill and feet black.

The figure is that of a male somewhat less than the natural size.



STRUTHIDEA CINEREA, *Gould.*

Grey Struthidea.

Struthidea cinerea, Gould in Proc. of Zool. Soc., Part IV. p. 143; and in Syn. Birds of Australia, Part I.—G. R. Gray, List of Gen. of Birds, 2nd Edit., p. 51.

Brachystoma cinerea, Swains. An. in Menag., and Two Cent. and a Quarter of New Birds, No. 51.—Class. of Birds, vol. ii. p. 266.

So LITTLE information has been obtained respecting this highly curious bird, that my account of it must necessarily be very meagre. From what I have personally observed, it would seem to be a species peculiar to the interior, and so far as is yet known, confined to the south-eastern portion of the Australian continent. I found it inhabiting the pine ridges, as they are termed by the colonists, bordering the extensive plains of the Upper and Lower Namoi, and giving a decided preference to the *Callitris pyramidalis*, a fine fir-like tree peculiar to the district. Those I observed were always in small companies of three or four together, on the topmost branches of the trees, and were extremely quick and restless, the whole company leaping from branch to branch in rapid succession, at the same time throwing up and expanding their tails and wings; these actions were generally accompanied with a harsh unpleasant note; their manners, in fact, closely resembled those of the White-winged Chough and the *Pomatorhini*: a knowledge of its nidification and the number and colour of its eggs would throw considerable light upon the affinities of this curious form. I would, therefore, particularly impress upon those who may reside in, or visit the localities it inhabits, to pay especial attention to, and to make known their observations upon, these points.

The food, as ascertained by dissection, was insects; the stomachs of those examined were tolerably hard and muscular, and contained the remains of coleoptera.

The sexes assimilate so closely in size and in the colouring of their plumage, that they are to be distinguished only by dissection.

Head, neck, back, and under surface grey, each feather tipped with lighter grey; wings brown; tail black, the middle feathers glossed with deep rich metallic green; irides pearly white; bill and legs black.

The figures are of the natural size.



CORVUS CORONOIDES, *Vig. and Horsf.*

White-eyed Crow.

Corvus Australis, Lath. Ind. Orn., vol. i. p. 151.?—Gmel. Syst. Nat., vol. i. p. 365.?—Daud. Orn., tom. ii. p. 226.?

South Sea Raven, Lath. Gen. Syn., vol. i. p. 363.?—Cook's Last Voy., vol. i. p. 109.?—Lath. Gen. Hist., vol. iii. p. 7.?

Corvus Coronoides, Vig. and Horsf. in Linn. Trans., vol. xv. p. 261.

Wur-dang, Aborigines of Western Australia.

Om-bo-lak, Aborigines of Port Essington.

Crow of the Colonists.

THIS species is so intermediate in size, in the development of the feathers of the throat, in its voice, and in many parts of its economy, between the Carrion Crow and Raven of our own island, that it is difficult to say to which of those species it is most nearly allied; I prefer however placing it among the true Crows to assigning it to a companionship with the larger members of the family. Every part of Australia yet explored has been found to be inhabited by it; some slight difference however is observable between individuals from Port Essington, Swan River, Van Diemen's Land, and New South Wales, but these differences appear to me to be too trivial to be regarded as specific; specimens from Western Australia are somewhat less in size than those procured in the other localities mentioned. When the birds are fully adult, the colour of the eye is white and is the same in the whole of them,—a circumstance which tends to strengthen the opinion I entertain of their being one and the same species.

In Western Australia for the greater part of the year this bird is met with in pairs or singly; but in May and June it congregates in families of from twenty to fifty, and is then very destructive to the farmer's seed crops, which appears to be its only inducement for assembling together, as it is not known to congregate at any other period. In New South Wales and Van Diemen's Land it is also usually seen in pairs, but occasionally congregated in small flocks. At Port Essington, where it is mostly seen in pairs, in quiet secluded places, it is not so abundant as in other parts of Australia.

The stomach is tolerably muscular, and the food consists of insects, carrion of all kinds, berries, seeds, grain, and other vegetable substances.

Its croak very much resembles that of the Carrion Crow, but differs in the last note being lengthened to a great extent.

Its nest, which is formed of sticks and of a large size, is usually placed near the top of the largest gum-trees. The eggs, which are three or four in number, are very long in form, and of a pale dull green colour, blotched, spotted and freckled all over with umber-brown, the blotches being of a much greater size at the larger end; they are about one inch and three-quarters long by one inch and an eighth broad.

The whole of the plumage rich shining purplish black, with the exception of the elongated feathers on the throat, which are slightly glossed with green; bill and feet black; irides in some white, in others brown.

The Plate represents a male, killed in Van Diemen's Land, of the natural size.

M. n. n. n. n. n.



NEOMORPHA GOULDII, *G. R. Gray.*

Gould's Neomorpha.

Neomorpha acutirostris, Gould in Proc. of Zool. Soc., Part IV. p. 144.—Ib. Syn. Birds of Australia, Part I.

——— *crassirostris*, Gould in Ib., p. 145.—Ib. in Syn. Birds of Australia, Part I.

——— *Gouldii*, G. R. Gray, List of Gen. of Birds, p. 12.

*E lli*a, Aborigines of New Zealand.

Two specimens of this highly curious and anomalous bird, male and female, wanting the legs and wings, which form part of the collection of the Zoological Society of London, were described by me in 1836, when, from the great difference in the form and length of their bills, I very naturally concluded that they constituted two distinct species, many genera even having been founded upon more trivial differences of character. Mr. George Robert Gray, however, entertained a different opinion from myself, and, while engaged upon his valuable little work entitled “A List of the Genera of Birds,” conceiving they were sexes of the same species, and that consequently both my names were inappropriate, inasmuch as, if either were retained, it might lead to some misconception, has been pleased to dedicate it to myself, a compliment which I duly appreciate; and I have only to hope that this change of the specific name may not be productive of any confusion on the subject.

Through the kindness of a friend, who presented me with a specimen, I brought to England the entire bird, and still more recently I have been much gratified by the receipt of an additional pair, male and female, direct from New Zealand. These, with some other very interesting birds, were consigned to me by Dr. Dieffenbach, with a request that they should be forwarded to the New Zealand Company, and it is to this body that I am indebted for permission to describe and figure the female of this and several other novelties sent home by Dr. Dieffenbach. In a letter written from Port Jackson, this gentleman confirms the opinion of Mr. G. R. Gray as to my *N. acutirostris* and *crassirostris* being the same species; and further states, that “these birds, which the natives call *E lli*a, are confined to the hills in the neighbourhood of Port Nicholson, whence the feathers of the tail, which are in great request among the natives, are sent as presents to all parts of the island. The natives regard the bird with the straight and stout beak as the male, and the other as the female. In three specimens I shot this was the case, and both birds are always together. These fine birds can only be obtained with the help of a native, who calls them with a shrill and long-continued whistle, resembling the sound of the native name of the species. After an extensive journey in the hilly forest in search of them, I had at last the pleasure of seeing four alight on the lower branches of the trees near which the native accompanying me stood. They came quick as lightning, descending from branch to branch, spreading out the tail, and throwing up the wings. Anxious to obtain them I fired, but they generally come so near that the natives kill them with sticks. Their food consists of seeds and insects: of their mode of nidification the natives could give me no information. The species is apparently becoming scarce, and will probably soon be exterminated.”

The whole of the plumage black, glossed with green; the tail largely tipped with white; bill horn-colour, much darker at the base; wattles rich orange; legs and toes blackish horn-colour; claws light horn-colour.

The figures represent a male and a female of the natural size, on the *Corynocarpus laevigata*.



POMATORHINUS TEMPORALIS.

Temporal Pomatorhinus.

Dusky Bee-eater, Lath. Gen. Hist., vol. iv. p. 146.

Pomatorhinus temporalis, Vig. and Horsf. in Linn. Trans., vol. xv. p. 330.—Sturt, Travels in Australia, vol. ii. pl. in p. 190.

——— *trivirgatus*, Temm. Pl. Col., 443.

As I have never seen an example of this species from any other portion of Australia than New South Wales, its habitat would appear to be restricted to that part of the country, where it is to be met in all those districts in which the *Angophoræ* and *Eucalypti* abound; it is gregarious in its habits, six or eight being generally seen in company, and is an exceedingly noisy and garrulous species; it ascends the trees with great rapidity in a succession of leaps from branch to branch, or along the slanting boles of those that are not perfectly erect: commencing with the branches nearest the ground it gradually ascends to the very top, whence with elevated tail it peeps down and continually utters its peculiar chattering cry; it is frequently to be seen on the ground, but on the slightest alarm it resorts to the trees and ascends them in the manner described. Its powers of flight are not very great, and appear to be only employed to convey it from the top of one tree to another, the whole troop following one after the other.

The situation of the nest is somewhat varied; when placed on the *Casuarinæ* it is usually constructed close to the stem of the tree, but on the *Eucalypti* it is mostly built at the extremity of the branch, and often within reach of the hand: it is of a large size, and very much resembles that of the Magpie of Europe, being of a completely domed form, outwardly composed of small long twigs about the size of a thorn, crossing each other, but very slightly interwoven: the entrance is in the form of a spout about half the length of an arm, and the twigs are placed in such a manner that the points incline towards each other, rendering it apparently impossible for the bird to enter without breaking them, while egress, on the other hand, is very easy; the nest has a thick inner lining, weighing several pounds, of the fine inner bark of trees and fine grasses. In traversing the pasture-lands at Camden, the whole of the Upper Hunter district and some parts of the Liverpool Plains, the attention of the traveller is often attracted by the large nest of this bird; and it frequently happens that four, six or even eight are to be seen on the same, or two or three closely planted trees.

The ground colour of their singular and beautifully marked eggs, which are four in number, is a buffy brown, clouded with dark brown and purple, and strongly marked with hair-like lines of black, which generally have a tendency to run round the egg; in some instances, however, they take a diagonal direction and give the egg a marble-like appearance; the markings of these eggs may be more easily imagined, by supposing a hair or hairs to have been carelessly drawn over them after having been dipped in ink; the eggs are one inch in length by nine lines in breadth.

The food consists of insects of various kinds.

The sexes do not differ in outward appearance, and may be thus described:—

Throat, centre of the breast and a broad stripe over each eye white; lores and ear-coverts dark brown; centre of the crown, back and sides of the neck greyish brown, gradually deepening into very dark brown on the wing-coverts, back and scapularies; wings very dark brown, with the exception of the inner webs of the primaries, which are rufous for three-fourths of their length from the base; tail-coverts and tail black, the latter largely tipped with pure white; abdomen and flanks dark brown, stained with rusty red; bill blackish olive-brown, except the basal portion of the lower mandible, which is greyish white; irides in the adult straw-yellow, in the young brown; feet blackish brown.

The figures are of the natural size.



POMATORHINUS RUBECULUS, *Gould.*

Red-breasted Pomatorhinus.

Pomatorhinus rubeculus, Gould in Proc. of Zool. Soc., Part VII. p. 144.

THIS bird is rather numerously dispersed over the northern parts of Australia, where it takes the place of the *Pomatorhinus temporalis* of New South Wales, from which it differs but little either in size or colouring ; its slightly smaller dimensions and the red hue of the breast are, however, characteristics by which it may at all times be distinguished from its prototype. Mr. Gilbert states that on the Cobourg Peninsula, it inhabits the open parts of the country, and when disturbed takes to the higher branches of the gums, first mounting upon one of the lower boughs, and then by a succession of hops and leaps ascending to the top. In its actions and economy it very closely assimilates to the other species of the genus, being like them a noisy and restless bird ; and feeding on insects, which are frequently sought for on the ground under the canopy of the larger trees.

Throat and stripe over each eye white ; chest and upper part of the abdomen dull brownish red ; stripe from the nostrils through each eye to the occiput blackish brown ; centre of the crown, back and lower part of the abdomen dark brown, slightly tinged with olive ; upper and under tail-coverts and tail black, all the feathers of the latter tipped with white ; irides straw-yellow ; bill blackish grey, becoming paler at the base ; legs and feet greenish grey.

The sexes are alike in plumage, as will be seen by the accompanying Plate, which represents a male and a female of the natural size.



POMATORHINUS SUPERCILIOSUS, *Vig. and Horsf.*

White-eyebrowed Pomatorhinus.

Pomatorhinus superciliosus, Vig. and Horsf. in Linn. Trans., vol. xv. p. 330.—Capt. Sturt's Expeditions to South Australia, vol. ii. p. 219.

Gnow-in, Aborigines of the mountain districts of Western Australia.

This species ranges over the whole of the southern portion of the continent of Australia, where it must be regarded as a bird peculiar to the interior, rather than as an inhabitant of the districts near the coast. It is common on the Liverpool Plains in New South Wales, and it was particularly noticed by my friend Captain Sturt during his expedition to the Darling. I myself encountered it near the bend of the river Murray, and it has also been found in the York district of Western Australia, but I have never heard of its having been seen either in the north or north-western parts of the country. It usually moves about in small troops of from six to ten in number, and is without exception the most restless, noisy, querulous bird I ever encountered. Its mode of progression among the branches of the trees is no less singular than is its voice different from that of other birds; it runs up and down the branches of the smaller trees with great rapidity and with the tail very much spread and raised above the level of the back. It usually feeds upon the ground under the Banksias and other low trees, but upon the least intrusion flits on to the lowest branch, and by a running or leaping motion quickly ascends to the highest, when it flies off to the next tree, uttering at the same time a jarring, chattering and discordant jumble of notes, which are sometimes preceded by a rapidly repeated, shrill, piping whistle.

When a troop are engaged in ascending the branches, which they usually do in line, they have a singular habit of suddenly assembling in a cluster, spreading their tails and wings, and puffing out their plumage until they resemble a complete ball of feathers.

The breeding-season commences in September and continues during the three following months. The nest is a large domed structure of dried sticks, with an entrance in the side, which is hidden from view by the sticks of the upper part of the nest being made to project over it for four or five inches like the thatch of a shed; the inside is generally lined with the soft parts of flowers and the dust of rotten wood, but occasionally with feathers. In Western Australia the nest is usually constructed in a dead jam-tree, the branches of which are drawn together at the top like a broom. It often happens that three or four pairs of birds build their nests in the same small clump of trees. The eggs are very like those of *P. temporalis*, the ground colour being olive-grey clouded with purplish brown, and streaked with similar hair-like lines of black; they are usually four in number, eleven and a half lines long by eight lines broad.

The sexes as well as the young so closely resemble each other, that they can only be distinguished by the aid of dissection.

Lores, space surrounding the eye and the ear-coverts dark silky brown; a broad line of white, bounded above and beneath with a narrow one of dark brown, commences at the base of the upper mandible, passes over the eye and continues to the occiput; crown of the head and all the upper surface, flanks and under tail-coverts olive-brown, passing into a purer and deeper brown on the primaries; tail dark brown, crossed by very indistinct bars of a darker colour, the five lateral feathers on each side tipped with white; chin, throat and chest white; bill blackish brown, the lower part of the under mandible greyish white; irides in the adult straw-yellow, in the young brown; feet blackish brown.

The figures are of the natural size.



MELIPHAGA NOVÆ-HOLLANDIÆ, *Vig. and Horsf.*

New Holland Honey-eater.

Certhia Novæ-Hollandiæ, Lath. Ind. Orn., p. 296.—Turton's Edit. of Linn. Syst. Nat., vol. i. p. 292.

New Holland Creeper, White's Journ., pl. in p. 186.—Lath. Gen. Hist., vol. iv. p. 171.—Shaw's Gen. Zool., vol. viii. p. 225.

L'Héorotaire tacheté, Vieill. Ois. dor., tom. ii. p. 91. pl. 57.

Meliphaga Novæ-Hollandiæ, Vig. and Horsf. in Linn. Trans., vol. xv. p. 311.

Melitreptus Novæ-Hollandiæ, Vieill. 2nde Edit. du Nouv. Dict. d'Hist. Nat., tom. xiv. p. 328 ; and Encyc. Méth. Orn., Part II. p. 606.

Meliphaga Balgonera, Steph. Cont. of Shaw's Gen. Zool., vol. xiv. p. 261.

Meliphaga barbata, Swains. Class. of Birds, vol. ii. p. 326.

Meliornis Novæ-Hollandiæ G. R. Gray, List of Gen. of Birds, 2nd Edit., p. 19.

I quite agree with Messrs. Vigors and Horsfield in making the bird forming the subject of the present Plate the type of the restricted genus *Meliphaga*. Independently of its claim to this distinction from the circumstance of its being the oldest known, it is the species to which the generic term is especially applicable, since, I conceive, it feeds less upon insects and more upon nectarine juices than any other of the family.

The *Meliphaga Novæ-Hollandiæ* is one of the most abundant and familiar birds inhabiting the colonies of New South Wales, Van Diemen's Land, and South Australia: all the gardens of the settlers are visited by it, and among their shrubs and flowering plants it annually breeds. It is not a migratory species, but occasionally deserts some districts for others whose flowering plants offer it a more tempting *locale*, and furnish it with a more abundant supply of food: the belts of Banksias, growing on sterile, sandy soils, afford it so congenial an asylum, that I am certainly not wrong in stating that they are never deserted by it, or that the one is a certain accompaniment of the other. The range enjoyed by this species appears to be confined to the south-eastern portions of Australia: it is abundant on the sandy districts of South Australia wherever the Banksias abound; but to the westward of this part of the country I have not traced it. At the Swan, and the other parts of the western coast, it certainly is never found. In Van Diemen's Land it is much more numerous on the northern than on the southern portion of the island; it is also most abundantly dispersed over all the islands in Bass's Straits, whose sandy, sterile soil favours the growth of the Banksias; it is equally common over every part of the colony of New South Wales, which may, in fact, be regarded as the great stronghold of the species; at the same time I must not fail to observe, that the districts bordering the sea-coast are most favourable to the growth of its favourite tree; hence while it is there most numerous, in the interior of the country it is seldom to be seen. It evinces a more decided preference for shrubs and low trees than for those of a larger growth; consequently it is a species particularly subject to the notice of man while it flits from bush to bush. Nor is it the least attractive of the Australian Fauna; the strikingly-contrasted markings of its plumage, and the beautiful appearance of its golden-edged wings, when passing with its quick, devious and jumping flight from shrub to shrub, rendering it a conspicuous and pleasing object.

It has a loud, shrill, liquid, although monotonous note. Its food, which consists of the pollen and juices of flowers, is procured while clinging and creeping among them in every variety of position: it also feeds on fruits and insects.

It usually rears two or three broods during the course of the season, which lasts from August to January: the nest is very easily found, being placed, in the forest, in any low open bush, and in the gardens among the shrubs and flowers: one of the nests in my collection was taken from a row of peas in the kitchen-garden of the Government House at Sydney. It is usually placed at about eighteen inches or two feet from the ground, and is a somewhat compact structure, composed of small wiry sticks, coarse grasses, and broad and narrow strips of bark; the inside is lined with the soft woolly portion of the blossoms of small ground plants: it usually lays two, but occasionally three eggs, which are of a pale buff, thinly spotted and freckled with deep chestnut-brown, particularly at the larger end, where they not unfrequently assume the form of a zone; their medium length is nine lines and a half, and breadth nearly seven lines.

The sexes are alike in colour and may be thus described:—

Top of the head and cheeks black, with minute white feathers on the forehead round the base of the upper mandible; a superciliary stripe, a moustache at the base of the upper mandible, and a small tuft of feathers immediately behind the ear-coverts white; feathers on the throat white and bristle-like; upper surface brownish black, becoming browner on the rump; wings brownish black, the outer edges of the quills margined at the base with beautiful wax-yellow, and faintly margined with white towards the extremities; tail brownish black, margined externally at the base with wax-yellow, and all but the two centre feathers with a large oval spot of white on the inner web at the tip; under surface white, broadly striped longitudinally with black, the black predominating on the breast and the white on the abdomen; irides white; bill and feet black.

The figures are those of a male and female of the natural size, on a Banksia of Van Diemen's Land.



MELIPHAGA LONGIROSTRIS, *Gould.*

Long-billed Honey-eater.

Meliphaga longirostris, Gould in Proc. of Zool. Soc., Sept. 22, 1846.

Bail-dene, Aborigines of the lowland districts of Western Australia.

Yellow-winged Honey-eater of the Colonists.

ALTHOUGH the *Meliphaga longirostris* and *Meliphaga Novæ-Hollandiæ* are very similar, they will on comparison prove to be specifically distinct; they are, in fact, beautiful representatives of each other on the opposite sides of the great Australian continent, the *M. longirostris* inhabiting the western, and the *M. Novæ-Hollandiæ* being spread over the eastern portion of the country, and it would be a matter of some interest to know at what degree of longitude the two species inosculate: I have traced the latter as far to the westward as Port Lincoln, while, so far as is known, the range of the former does not extend beyond the Swan River settlement. Several points of difference are found to exist in the two species, the most material of which are in the shape and length of the bill, and in the size of the white mark on the fore-part of the cheeks; the *M. longirostris*, as its name implies, has the bill much more lengthened and comparatively stouter than that of its near ally, and it moreover has the white patch on the face much less defined, and blended to a greater extent with the neighbouring black colouring; in the size of the body the two species are very much alike.

The *M. longirostris* inhabits all those districts of the Swan River settlement in which there are Banksias, a group of trees which it is evidently formed to inhabit, and the flowers of which yield it a constant supply of food, both of insects and honey. Like the other species of the group, it is very pugnacious, and when fighting utters a rapidly repeated chirrup, very much resembling that of the European Sparrow.

Its flight, which is varied, is sometimes extremely rapid.

It is a very early breeder, commencing in the first days of July and continuing as late as the last week in November. The nest consists of small sticks and fibrous roots, lined with *Zamia* wool or the buds of flowers; and is built in a variety of situations, sometimes in small thinly-branched trees, at about twelve feet from the ground; at others in small clumps of grass, only a few inches above the ground: in the York district it is frequently constructed among the bulrushes; but the most usual situation is in a scrubby bush surrounded with grass, at an altitude of about two or three feet; the eggs are ordinarily two in number, but towards the latter end of the breeding-season three are often found; their ground-colour is a delicate buff, with the larger end clouded with reddish buff, and thickly spotted and blotched with chestnut-brown and chestnut-red arranged in the form of a zone; their medium length is nine lines, and breadth seven lines.

The sexes are alike in colouring, but the female is about one-fifth smaller than her mate in all their admeasurements.

Top of the head and cheeks black, with minute white feathers on the forehead round the base of the upper mandible; a superciliary stripe, a moustache at the base of the lower mandible, and a small tuft of feathers immediately behind the ear-coverts white; feathers on the throat white and bristle-like; upper surface brownish black, becoming browner on the rump; wings brownish black, the outer edges of the quills margined at the base with beautiful wax-yellow, and faintly margined with white towards the extremities; tail brownish black, margined externally at the base with wax-yellow, and all but the two centre feathers with a large oval spot of white on the inner web at the tip; surface white, broadly striped with black, the black predominating on the breast and the white on the abdomen; irides white; bill and feet black.

The figures are of the natural size.



MELIPHAGA SERICEA, *Gould.*

White-cheeked Honey-eater.

New Holland Creeper, female, White's Voy., pl. in p. 297.

L'Heorotaire noir, Vieill. Ois. dor., tom. ii. p. 106. pl. 71.

Meliphaga sericea, Gould in Proc. of Zool. Soc., Part IV. p. 144 ; and in Syn. Birds of Australia, Part I.

Meliphaga sericeola, Gould in Proc. of Zool. Soc., Part V. p. 152, female.

THE White-cheeked Honey-eater is an inhabitant of New South Wales, and certainly proceeds as far to the eastward as Moreton Bay ; but the birds inhabiting the country to the northward of this are so entirely unknown, that it is impossible to say how far its range may extend in that direction. It has not yet been discovered in Van Diemen's Land or South Australia. It differs materially in its habits and disposition from the *Meliphaga Novæ-Hollandiæ*, being less exclusively confined to the brushes, and affecting localities of a more open character. I observed it to be tolerably abundant in the Illawarra district, particularly among the shrubs surrounding the open glades of the luxuriant brushes ; it is also common at Botany Bay, and on most parts of the sea-coast between that place and the river Clarence ; but I never met with it during any of my excursions into the interior of the country.

I found it, unlike its near ally, a remarkably shy species ; so much so, that I frequently had much difficulty in getting within gun-shot of it. When perched on the trees it is a most showy bird, its white cheek-feathers and contrasted tints of colouring rendering it very conspicuous.

I did not succeed in finding its nest, a circumstance I much regret ; for although it is probable that in the colour of its eggs and its mode of nidification it generally resembles the *M. Novæ-Hollandiæ*, there will doubtless be found as great a specific difference in these respects as is to be observed in the markings of their plumage.

The sexes are alike in colour, but the female is somewhat the smaller. The white cheeks and the absence of white tips to the tail-feathers will at all times distinguish it from the *M. Novæ-Hollandiæ*.

Crown of the head, throat, and space round the eye black ; an obscure band of white crosses the forehead and passes over each eye ; a beautiful plume of hair-like white feathers spreads over the cheeks and ear-coverts ; back dusky brown, striped longitudinally with black ; under surface white, each feather having a central longitudinal mark of black ; wings dark brown, the outer edge of all the primaries and secondaries wax-yellow ; tail dark brown, the external edges margined with yellow ; irides dark brown ; feet and bill black.

The figures represent two males of the natural size, on a plant growing in the district of Illawarra, called Christmas by the settlers.



MELIPHAGA MYSTACALIS, *Gould.*

Moustached Honey-eater.

Meliphaga mystacalis, Gould in Proc. of Zool. Soc., Part VIII. p. 161.
Ban-dene, Aborigines of Swan River.

At the time I described this new species of *Meliphaga* in the "Proceedings of the Zoological Society," I was not aware that M. Temminck had applied the term *mystacalis* to another species of Honey-eater, or I should have selected a different appellation; as however M. Temminck's bird belongs to a distinct section of this great family, any alteration would rather tend to produce confusion than otherwise.

The *Meliphaga mystacalis* is a native of Western Australia, in which country it beautifully represents the *Meliphaga sericea* of New South Wales. It is abundant in the vicinity of Perth and Fremantle, and is sparingly dispersed over many other districts of the Swan River colony; according to Mr. Gilbert it is remarkably shy, and only found in the most secluded places in the bush, or on the summits of the limestone hills running parallel with the beach; it generally feeds on the topmost branches of the *Banksia*, and is very pugnacious, defending its young from intruders with the most determined courage.

Its note is a loud chirp, which is often rapidly repeated six or seven times in succession; but while rising on the wing, it emits a song very much resembling that of the Tree Lark of Europe.

Its flight, which is very varied, is occasionally characterized by a great degree of rapidity: during the season of incubation it frequently rises above its nest in a perpendicular direction, and having attained a considerable height, suddenly closes its wings, and descends abruptly until it reaches the top of the scrub, when the wings are again expanded, and it flies horizontally for a few yards, perches, and then utters its peculiar sharp, chirping note; it also often hovers over small trees, and captures insects after the manner of the Flycatchers.

It is a very early breeder, young birds ready to leave the nest having been found on the 8th of August; it has also been met with breeding as late as November; it doubtless therefore produces more than one brood in the course of the season. The nest is generally built near the top of a small, weak, thinly-branched bush, of about two or three feet in height, situated in a plantation of seedling mahogany or other *Eucalypti*; it is formed of small dried sticks, grass, and narrow strips of soft bark, and is usually lined with *Zamia* wool; but in those parts of the country where that plant is not found, the soft buds of flowers, or the hairy, flowering part of grasses, form the lining material, and in the neighbourhood of sheep-walks, wool collected from the scrub. The eggs are usually two in number, but frequently only a single one is laid and hatched. They are nine lines long by seven lines broad, and are usually of a dull reddish buff, spotted very distinctly with chestnut and reddish brown, interspersed with obscure dashes of purplish grey; but they appear to differ considerably in colour and form; I have seen one variety in which the ground colour was nearly white and destitute of markings, except at the larger end, where it was clouded with dull reddish brown.

The stomach is small and muscular, and the food consists of small coleoptera and other insects.

The sexes are only distinguishable by the smaller size of the female.

Head, chin and throat black; over the eye a narrow line of white; ears covered by a conspicuous tuft of white feathers, which are closely set and terminate in a point towards the back; upper surface brownish black, the feathers edged with white; under surface white, with a broad stripe of black down the centre of each feather; wings and tail blackish brown, conspicuously margined with bright yellow; irides brown; bill black; feet blackish brown.

The figures are of the natural size, and represent the bird on a species of *Banksia*, one of a tribe of trees on which it is most frequently found.



MELIPHAGA AUSTRALASIANA, *Vig. and Horsf.*

Tasmanian Honey-eater.

L'Heoro-taire noir et blanc, Vieill. Ois. Dor., t. ii. pl. 55, p. 89.

Certhia Australasiana, Shaw, Gen. Zool., vol. viii. p. 226.

Meliphaga Australasiana, Vig. and Horsf. in Linn. Trans., vol. xv. p. 313.—Swains. Class. of Birds, vol. ii. p. 326.

White-browed Honey-eater? Lath. Gen. Hist., vol. iv. p. 172.

Meliphaga inornata, Gould, in Proc. of Zool. Soc., Part. V. 1837, p. 152.—Ibid., Syn. of Birds of Australia, Part IV. female.

This little Honey-eater is abundantly dispersed over every part of Van Diemen's Land, to which country, in all probability, the species is restricted, though there is another in South Australia and New South Wales so nearly resembling it, as to render this supposition doubtful, and a further acquaintance with the continental bird is necessary to determine whether it is a mere variety or a distinct species. The chief difference consists in its being smaller in size, and less brilliantly marked on the wing.

The *Meliphaga Australasiana* is one of the few species that enlivens with their presence the almost impenetrable forests that cover a great portion of Van Diemen's Land, giving preference to such parts as are clothed with a thick brush of dwarf shrubby trees growing beneath the more lofty gums. The extreme silence of these solitudes is agreeably broken by the loud shrill and liquid notes which are poured forth in quick succession by numbers of this bird in various parts of the wood. It also resorts to the thick beds of the *Epacris impressa*, whose red and white heath-like flowers bespangle the sides of the more open hills: the blossoms of this beautiful plant afford it an abundant supply of food, which it seeks so intently as to admit of a sufficiently close approach to enable one to observe its actions without disturbing it; while thus occupied it may be seen clinging to the stems in every possible attitude, inserting its slender brush-like tongue up the tube of every floret with amazing rapidity. Independently of honey it feeds on insects of various kinds, particularly those of the orders *Diptera* and *Hymenoptera*. When disturbed it flits off with a quick darting flight, settling again at the distance of a few yards among the thickest tufts of the *Epacris*, or shrouds itself from observation among the foliage of the sapling gums.

It is extremely abundant on the hills at the foot of Mount Wellington, and it may also be observed at most seasons among the thick beds of *Epacris* growing on the north side of the Derwent, between Kangaroo Point and Clarence Plains. I also observed it in every similar situation on the banks of the Tamar, at the other extremity of the island. The breeding-season is September and the four following months, during which period each pair of birds rear two or three broods; and it is a curious fact, that at the first laying only two eggs are found in each nest, while in the height of the summer, when insect-food is far more abundant, they almost invariably lay three: the cause of which is either that the birds are more vigorous as the season advances, or that Nature has wisely ordained that the number of young should bear a relative proportion to the amount of food to be procured for their support.

The nest is always placed on a low shrub within a foot or two of the ground; it is of a round, open form, and is outwardly constructed of the inner rind of the stringy bark gum-tree, generally lined with fine grasses.

Unlike every other member of the restricted genus *Meliphaga* that I have had opportunities of observing, the sexes are distinguished by a different style of colouring, a circumstance which led me to characterize the female as a distinct species under the name of *Meliphaga inornata*, an error which my visit to the country enables me now to rectify.

The male has a black stripe passing from the base of the bill through the eye, and a lunar-shaped mark down each side the breast, nearly meeting in the centre, black; a narrow stripe above the eye and one behind the lunar marks on the breast white; all the upper surface dusky black; wings blackish brown, the primaries and secondaries margined externally, particularly at their base, with golden yellow; tail-feathers brownish black, fringed with golden yellow at the base, the two lateral feathers having a long oval spot of white on their inner webs at the tip; throat and chest white, with a streak of brown down the middle of each feather; centre of the abdomen white; flanks and under tail-coverts sooty grey; irides red; bill and feet black.

The female is of a nearly uniform dusky brown above and beneath; is destitute of the white stripe over the eye and the white spots on the lateral tail-feathers; has only a faint tinge of the golden yellow on the wings and tail; the black and white marks on the throat not very apparent; the throat pale brownish grey instead of white, and the irides brown.

The Plate represents a male and female of the natural size on the *Epacris impressa*.



GLYCIPHILA FULVIFRONS, *Swains.*

Fulvous-fronted Honey-eater.

Meliphaga fulvifrons, Vig. and Horsf. in Linn. Trans., vol. xv. p. 317.—Lewin, Birds of New Holl., pl. 22

Glyciphila fulvifrons, Swains. Class. of Birds, vol. ii. p. 326.—G. R. Gray, List of Gen. of Birds, 2nd Edit., p. 319

Philedon rubrifrons, Less. Voy. de la Coq.

Wy-ro-dju-dong, Aborigines of the lowland districts of Western Australia.

White-throated Honey-sucker, Colonists of Swan River.

THIS species would appear to be distributed over the whole of the southern portion of the Australian continent, since it is to be found in New South Wales, South Australia and at Swan River, where it is particularly abundant on the limestone hills near the beach around Fremantle; it is also an inhabitant of Van Diemen's Land, and all the islands in Bass's Straits. I have never observed it in collections from the northern coast of Australia, whence I infer that it is confined to those portions of the country mentioned above. In Van Diemen's Land it is by far the most abundant on the north side of the island, while in the neighbourhood of Hobart Town it is rarely, if ever, seen.

Independently of a slight difference in structure, the habits of this bird differ sufficiently from those of the true *Meliphagi* to fully justify its separation into a distinct genus. In the first place it affects very different localities, preferring to dwell among the trees that crown the low stony ridges, rather than those growing on the lower lands or the brushes; its flight is also very rapid, and, which is rather remarkable for the smaller Honey-eaters, it mounts high in the air, and flies off to a distance with an extremely rapid horizontal and even motion. It is an exceedingly active bird among the branches, clinging about and around the flowers of the *Eucalypti* in search of food in every variety of graceful position.

The site generally chosen for its nest, as observed at Swan River, is some low-bush or scrubby plant, in which it is often placed so near the ground as almost to touch; it is of a deep cup-shaped and compact form, constructed of dried grasses, and frequently lined with *Zamia* wool, or buds of the *Banksia* cones; sometimes, however, sheep's wool is employed to impart warmth and softness; the materials in fact depend entirely upon the nature of those that the locality may furnish, while in the form of the nest little or no variation occurs. The eggs are large for the size of the bird, and are often much lengthened in figure; sometimes they are quite white without the least trace of spots, but they are generally blotched with large marks of chestnut-red; occasionally this colour is very faint, and spread over the surface of the shell as if stained with it; in other instances the marks are very bold and decided, forming a strong contrast to the whiteness of the other part of the surface: the medium length of the eggs is ten lines and a half, and breadth seven lines; they are usually two in number, but the bird very frequently lays and hatches only one. The breeding-season lasts from August to February.

The song is rather remarkable, being commenced with a single note slowly drawn out, and followed by a quick repetition of a double note, repeated six or eight times in succession; it is mostly uttered when the bird is perched on the topmost branch of a tree.

Its food consists of the pollen of flowers and insects.

The sexes present the usual difference in size, the female being somewhat less than her mate; but in the colour and disposition of the markings they are alike. The young, of which an accurate figure is given in the accompanying Plate, has all the upper surface dark brown streaked with buffy white, and is entirely destitute of the fulvous colouring of the forehead and the lunulate markings on the sides of the chest; the throat, moreover, is of a dull wax-yellow, the chest mottled dark brown and buffy white, and the primaries edged with a dull wax-yellow.

Forehead and under surface of the wing fulvous or tawny; over each eye a narrow line of white; a line of brownish black commences at the base of the bill, surrounds the eye, passes down the sides of the neck and chest, and nearly meets on the breast; behind the ear-coverts a narrow stripe of buffy white, separated from the line over the eye by a small patch of black; centre of the back dark brown, with a stripe of ashy brown down the centre of each feather; the remainder of the upper surface and flanks ashy brown; throat and abdomen white; wings and tail dark brown, the wing-coverts and primaries margined with olive; irides brown; bill blackish brown; legs and feet greenish grey.

The figures are those of a male, a female, and a young bird of the natural size, on one of the *Banksias* of Van Diemen's Land.



GLYCIPHILA ALBIFRONS, *Gould.*

White-fronted Honey-eater.

Glyciphila albifrons, Gould in Proc. of Zool. Soc., Part VIII. p. 160.

Gool-be-gool-burn, Aborigines of the mountain districts of Western Australia.

Black-throated Honey-sucker, Colonists of Swan River.

I FIRST observed this fine new species of *Glyciphila* in the great Murray scrub of South Australia, where I succeeded in killing several specimens of both sexes; it is also an inhabitant of the York and other inland districts of Western Australia, and Captain Sturt obtained an example during one of his overland journeys from Sydney to Adelaide: we may consequently infer that, like many others, it is a species peculiar to the interior, where it probably supplies the place of the Fulvous-fronted Honey-eater, so abundantly dispersed along the line of coast.

In its disposition the present bird is remarkably shy, a trait common, it would seem, to all the members of the genus. All those I observed were busily engaged in collecting their insect and saccharine food from the flowers of a species of dwarf *Eucalyptus*, during which their actions much resembled those of the restricted genus *Meliphaga*; but they appeared if possible to hang and cling beneath the branches with even greater facility.

Its flight much resembles that of its near ally, being short, performed in sudden starts, and all times unsteady.

Its note is a double one, rapidly repeated, and much resembles the double call of the *Pardalotus striatus*, but is much louder and more distinct.

The breeding-season lasts from August to February. The nests observed were constructed in the fork of a small dead branch in an exposed situation, and without the slightest shelter; they were very similar to that of *Meliphaga longirostris*, but more shallow and less neatly formed. The eggs also closely resembled those of that bird; the ground-colour being delicate buff, clouded with reddish buff at the larger end, and distinctly spotted with chestnut-red and purplish grey, thickly disposed at the larger end, but very sparingly over the rest of the surface; the eggs are nine and a half lines long by seven lines broad.

The sexes present no difference in colour or markings, but as usual the female is much less in size.

Forehead, lores, a narrow ring round the eye, and a narrow line running from the angle of the lower mandible white; crown of the head black, each feather slightly margined with white; ear-coverts silvery blackish grey, behind which an irregular line of white; all the upper surface brown, irregularly margined with white, producing a mottled appearance; wings and tail brown, the primaries margined externally with yellowish green; chin and throat brownish black, the former minutely speckled with white; under surface of the wing buff; chest and abdomen white, striped with blackish brown on the flanks; irides dark brown; naked skin round the eyes dark brownish black in front, arterial blood-red behind; bill black; legs and feet greenish grey.

The figures are of the natural size.



GLYCIPHILA FASCIATA, *Gould.*

Fasciated Honey-eater.

Glyciphila fasciata, Gould in Proc. of Zool. Soc., October 11, 1842.

ALL the specimens hitherto collected of this new species have been obtained from the Cobourg Peninsula, in the neighbourhood of Port Essington, where, according to Mr. Gilbert, it is far from being common, for in his notes he says, "I only once observed it near the settlement, and once again met with it on the neck of the peninsula near the main land. Its favourite haunts appeared to be the upper branches of the *Melaleucæ*, from the blossoms of which it collects its food. In both instances I observed small families of about twelve in number. Its note is a sharp shrill piping call, very rapidly repeated."

The fasciated markings of the under surface, by which this species is at once distinguished from every other member of the genus to which it is at present assigned, and the circumstance of its moving about in small parties, would seem to indicate the propriety of its separation; as, however, it is precisely of the same structure, and agrees with them in the colouring of the upper surface, I have preferred retaining it in the present genus.

Its food consists of insects generally, the pollen, and occasionally the buds of flowers.

Crown of the head brownish black, with a small crescent of white at the extremity of each feather; feathers of the back very dark brown, margined with buffy brown; rump tinged with rufous; wings and tail dark brown, fringed with light brown; sides of the face, throat and under surface white; from the angle of the mouth down the side of the neck a narrow stripe of brownish black; chest crossed by a number of semi-circular brownish black fasciæ; flanks and under tail-coverts buff, the former with a stripe of brownish black down the centre; irides reddish brown; bill greenish-grey; feet aurora-red.

The figures are those of a male and a female of the natural size.



GLYCIPHILA OCULARIS, *Gould.*

Brown Honey-eater.

Glyciphila? ocularis, Gould in Proc. of Zool. Soc., Part V. p. 154 ; and in Syn. Birds of Australia, Part IV.

————— ? *subocularis*, Gould in Proc. of Zool. Soc., Part V. p. 154 ; and in Syn. Birds of Australia, Part IV., female or young male.

Jin-jō-gour, Aborigines of the mountain districts of Western Australia.

Brown Honey-sucker of the Colonists.

No one of the numerous species of Honey-eaters inhabiting Australia appears to enjoy a more universal range than the *Glyciphila ocularis* ; I have received specimens from every portion of the country yet visited ; and if it does not also inhabit New Guinea and Timor, its place is there supplied by species so very nearly allied to it, that they are not readily distinguishable from each other.

It inhabits every variety of situation : I met with it in abundance on Baker's Island at the mouth of the Hunter, and on the banks of the Namoi in the interior of New South Wales ; and Mr. Gilbert records that he found it to be equally numerous at Swan River and at Port Essington : in each and all of these various localities it was observed feeding alike on the topmost branches of the tallest gums, as well as in the low trees.

In its actions and manners it displays the usual activity of the Honey-eaters generally, creeping and clinging among the branches with the greatest ease, and particularly affecting those most laden with blossoms, into which it inserts its brush-like tongue to procure the sweet pollen : like the other species of the group, it also feeds with avidity upon all kinds of small insects.

Its powers of song are very great, the most frequently repeated note being remarkably shrill, rich, clear and distinct in tone, and the others forming an agreeable melody. While the female is sitting upon her eggs, the male sings all day long with scarcely any intermission.

Its flight merely consists of short flits from tree to tree.

The situations chosen for the site of the nest are various, but in nearly every instance contiguous to water and frequently overhanging it ; the most favourite position appears to be the side of a tea-tree, the bark of which is hanging down in tatters ; it is also often seen suspended in the most conspicuous manner from the drooping branches of the stink-wood ; and in one instance Mr. Gilbert found it attached to two slender fibrous roots, hanging from beneath a bank over a pool of water. The nest is generally formed of soft strips of paper bark or dried grasses, matted together with small spiders' cocoons or vegetable fibres, and so closely resembles the branch upon which it is placed, as to render it very difficult of detection ; it is usually lined with fine grasses, zamia wool, the soft part of the cones of the *Banksiæ*, delicate white buds of flowers, or sheep's wool collected from the bushes of the sheep-runs.

September, October and November constitute the breeding-season. The eggs, which are two in number, vary considerably in their colouring, some being pure white without a trace of spots or markings, others having a zone round the larger end formed of freckled markings of light reddish brown ; others again are thinly sprinkled with this colour over the whole of their surface, and one or two procured at Swan River were bespeckled with numerous fine freckles of bluish grey ; the average length of a number of eggs was eight lines by six lines in breadth.

Crown of the head, all the upper surface, wings and tail dark olive-brown, passing into yellowish brown on the rump and bases of the tail-feathers ; primaries and secondaries margined with wax-yellow ; immediately behind the eye a very small patch of glossy brownish yellow feathers, the anterior portion of which is silvery ; throat and chest greyish brown ; abdomen and under tail-coverts olive-grey ; irides light red ; bill dark brown ; legs and feet bluish grey ; tarsi tinged with green.

The Plate represents a male and a female of the natural size.



PTILOTIS CHRYSOTIS.

Yellow-eared Honey-eater.

Certhia chrysotis, Lath. Ind. Orn., Supp., p. xxxviii. No. 16.

Yellow-eared Honey-eater, Lath. Gen. Hist., vol. iv. p. 195. No. 54.

Meliphaga chrysotis, Lewin, Birds of New Holl., pl. v.—Vig. and Horsf, in Linn. Trans., vol. xv. p. 314.—Gould in Syn. Birds of Australia, Part I.

Spot-eared Creeper, Shaw, Zool., vol. viii. p. 244.

THE Yellow-eared Honey eater is very common in New South Wales, where it inhabits the thick brushes near the sea, breeding and dwelling therein all the year round. I found it especially abundant in all parts of the river Hunter, as well as in the cedar brushes of the Liverpool and other ranges of hills. No examples of this bird came under my notice in South Australia, and I do not believe that it extends so far to the westward; neither does it occur at Port Essington, in which district a different character of country and of vegetation prevails. Mr. Bynoe procured a single specimen on the north coast, but did not note the precise locality. In its habits and disposition it assimilates very closely to the *Ptilotis flavigula* of Van Diemen's Land. It prefers low shrubby trees to those of a larger growth, frequently descending to the ground among the underwood in search of insects. No one species of the genus is more bold and fearless of man; I have often been permitted to approach within a few yards of it while threading the dense brushes without causing it the least alarm. Like the rest of its genus, this species feeds on insects, the pollen of flowers, and occasionally fruits and berries. The flowering creeper upon which the bird is figured (together with many similar plants), growing in the utmost luxuriance on the sides of rivers, and attracting a corresponding amount of insect life, is often visited by the *Ptilotis chrysotis*, which may be observed busily engaged in search of its prey, heedless of the proximity of a human intruder in its sequestered haunts. It is not celebrated for the richness or liquidity of its notes or for the volubility of its song, but its presence, when not visible among the foliage, is always to be detected by its loud ringing whistling note, which is continually poured forth during the months of spring and summer.

The sexes are alike in colour, but the female presents the same disparity of size that is observable between the sexes of the other species of the genus; the young at an early age assume the plumage of the adults, but the colour is not so rich or decided.

I found a nest of this species in a gully under the Liverpool range; it was placed in the thickest part of one of the creeping plants which overhung a small pool of water; like that of the rest of the genus, it was cup-shaped in form, suspended by the brim, and very neatly made of sticks and lined with very fine twigs; the eggs are two in number, of a pearly white spotted with purplish brown, the spots forming a zone at the large end; they are eleven and a half lines long by eight lines broad.

Upper surface olive-green; under surface the same colour but paler; behind the ears an oval spot of fine yellow; region of the eyes blackish; below the eye a narrow stripe of yellow; bill black at the tip, yellow at the base; legs purplish flesh-colour; irides dark lead-colour; gape white.

The Plate represents a male and a female of the natural size.



PTILOTIS SONORUS, *Gould.*

Singing Honey-eater.

Ptilotis sonor, Gould in Proc. of Zool. Soc., Part VIII. p. 160.

Doô-rum-dôô-rum, Aborigines of the lowland, and

Gool-bô-ort, Aborigines of the mountain districts of Western Australia.

Larger Honey-sucker, Colonists of Swan River.

I HAVE abundant evidence that the range of this species extends across the entire continent of Australia from east to west; I found it very numerous on the Namoi and other portions of the interior of New South Wales, and equally plentiful in a part of the country of a similar character to the northward of Adelaide, and it is also one of the commonest birds of the colony of Swan River. It does not, I believe, extend very far north, at least no examples have as yet been sent from the northern parts of the country. Moderately-sized trees, particularly *Casuarinæ* and *Banksiæ*, thinly scattered over grassy plains and the crowns and sides of low hills, are its usual coverts, and I have never found it in the brushes which form so peculiar a feature in New South Wales, and which are the ordinary abode of several other species of the genus. In Western Australia it enters the gardens and commits considerable havoc among the fruit-trees, particularly figs, the seeds of which appear to be its most favourite food. It also feeds upon insects, which are principally sought for among the branches; but it frequently descends and seeks for them and small seeds on the ground, when it hops around the boles and beneath the branches of the trees in a most lively manner.

As its name implies, it possesses the power of singing, and for an Australian bird, and particularly a Honey-eater, in no ordinary degree; its notes being so full, clear and loud as to be heard at a considerable distance, and very much resembling those of the Missel Thrush (*Turdus viscivorus*). In South Australia I heard it in full song in the midst of winter, when it was one of the shiest birds of the country, and I find that in the memoranda made at the time I have described its notes as full, loud and ringing.

It is exceedingly pugnacious in disposition, often fighting severe battles with the Wattle Birds (*Anthochaeræ*), and other species even larger than those.

Its flight is undulating and tolerably rapid.

The breeding-season commences in August and terminates in December. The nest is a frail, round, cup-shaped structure, the materials of which vary in different situations; those observed by me in New South Wales being composed of fine dried stalks of annuals thinly lined with fibrous roots woven together with spiders' webs, and suspended by the rim to two or three fine twigs near the centre of the tree; on the other hand, those observed by Mr. Gilbert in Western Australia were formed of green grasses, which become white and wiry when dry, matted together with the hair of kangaroos or opossums, lined with fine grasses and the down of flowers, and placed in a thick scrubby bush at about three feet from the ground.

The eggs are usually two, but occasionally three in number, of a light yellowish buff, thickly freckled with small indistinct reddish brown marks; or of a nearly uniform fleshy buff without spots or markings, but of a deeper tint at the larger end; their medium length is eleven lines, and breadth eight lines.

Crown of the head and all the upper surface greyish olive; wings and tail brown, margined on their external webs with greenish yellow; lores, space around the eye and broad line down the sides of the neck black; ear-coverts pale yellow, behind which is an obscure spot of greyish white; throat and under surface pale yellowish grey striated with light brown; irides dark brown; bill black; legs and feet greenish grey.

The female is like the male in colour, but smaller in all her dimensions.

The Plate represents the two sexes and a nest of the natural size on a branch of a *Casuarina*.



PTILOTIS VERSICOLOR, *Gould.*

Varied Honey-eater.

Ptilotis versicolor, Gould in Proc. of Zool. Soc., Part X. p. 136.

THIS fine species, which is a native of the northern portion of Australia, is only known to me from a specimen contained in a collection from that part of the country. That its whole habits and economy will hereafter be found to assimilate most closely to those of the *Ptilotis sonorus* is certain, as it is most intimately allied to that species, but may be readily distinguished from it by its larger size, its much longer and stouter bill, by the more contrasted character of its markings, and the sulphur or wax-yellow colour which pervades the breast and upper surface. It is one of the finest species yet discovered of the genus to which it belongs, and is at present so rare, that my own specimen is probably the only one that has been brought to Europe.

All the upper surface brownish olive, tinged with yellowish olive on the margins of the feathers; outer webs of the primaries and tail wax-yellow; inner webs brown; under surface of the wing and tail yellowish buff; stripe over the eye to the back of the neck black; ear-coverts dark grey; below the ear-coverts a stripe of bright yellow; throat and under surface yellow, becoming paler as it approaches the vent, each feather with a stripe of brown down the centre.

The Plate represents the bird in two positions of the natural size.



PTILOTIS FLAVIGULA, *Gould.*

Yellow-throated Honey-eater.

Ptilotis flavigula, Gould in Proc. of Zool. Soc., Part VI. p. 24 ; and in Syn. Birds of Australia, Part IV.

THIS fine and conspicuous species of *Ptilotis* is abundant in all the ravines round Hobart Town, and is very generally dispersed over the whole of Van Diemen's Land, to which island I believe it to be exclusively confined, for I neither observed it myself nor have I met with any example in the numerous collections I have received from South Australia and New South Wales. It is very animated and sprightly in its disposition, extremely quick in its actions, elegant in its form, and graceful in all its movements; but as its colouring assimilates in a remarkable degree with that of the leaves of the trees it frequents, it is somewhat difficult of detection. When engaged in searching for food it frequently expands its wings and tail, creeps and clings among the branches in a variety of beautiful attitudes, and often suspends itself to the extreme ends of the outermost twigs; it occasionally perches on the dead branches of the highest trees, but is mostly to be met with in the dense thickets. It flies in an undulating manner like a Woodpecker, but this power is rarely exercised.

Its note is a full, loud, powerful and melodious call.

The stomach is muscular, but of a very small size, and the food consists of bees, wasps and other Hymenoptera, to which are added Coleoptera of various kinds, and the pollen of flowers.

It is a very early breeder, as proved by my finding a nest containing two young birds covered with black down and about two days old, on the 28th of September.

The nest of this species, which is generally placed in a low bush, differs very considerably from those of all the other Honey-eaters with which I am acquainted, particularly in the character of the material forming the lining; it is the largest and warmest of the whole, and is usually formed of ribbons of stringy bark, mixed with grass and the cocoons of spiders; towards the cavity it is more neatly built, and is lined internally with opossum or kangaroo fur; in some instances the hair-like material at the base of the large leaf-stalks of the tree-fern is employed for the lining, and in others there is merely a flooring of wiry grasses and fine twigs. The eggs, which are either two or three in number, are of the most delicate fleshy buff, rather strongly but thinly spotted with small, roundish, prominent dots of chestnut-red, intermingled with which are a few indistinct dots of purplish grey; their average length is eleven lines, and breadth eight lines.

The only external difference in the sexes is the smaller size of the female, which is nearly a third less than that of the male.

Lores and cheeks black; crown of the head, ear-coverts, breast and under surface dark grey, with silvery reflexions; a few of the ear-coverts tipped with yellow; chin and upper part of the throat rich gamboge-yellow; all the upper surface, wings and tail rich yellowish olive, brightest on the margins of the quill- and tail-feathers; inner webs of the primaries and secondaries dark brown; under surface of the shoulder and wing gamboge-yellow; abdomen and flanks washed with olive; bill black; interior of the bill, throat and tongue rich orange; irides wood-brown; legs and feet brownish lead-colour.

The young birds assume the adult colouring from the time they leave the nest.

The Plate represents a male and a female of the natural size.



PTILOTIS LEUCOTIS.

White-eared Honey-eater.

Turdus leucotis, Lath. Ind. Orn., p. xlv. No. 26.

White-eared Honey-eater, Lath. Gen. Hist., vol. iv. p. 186. No. 41.

White-eared Thrush, Lath. Gen. Syn. Suppl., vol. ii. p. 373.

Meliphaga leucotis, Vig. and Horsf. in Linn. Trans., vol. xv. p. 314.—Jard. and Selb. Ill. Orn., vol. i. pl. xxxv. fig. 2.—Temm. Man., part i. p. lxxxvii.—Temm. Pl. Col. 435.—Gould in Syn. Birds of Australia, Part I.

THE White-eared Honey-eater enjoys a very wide range of habitat; I found it in abundance in the belts of the Murray and other parts of South Australia, and in the brushes near the coast as well as in the open forests of *Eucalypti* in New South Wales; it is very common in the Bargo brush on the road to Argyle, and Mr. Gilbert mentions that he shot a specimen near York in the interior of Western Australia, but it is there so rare that he believed the individual he procured was the only one that had been seen. It is as much an inhabitant of the mountainous as of the lowland parts of the country, and is always engaged in creeping and clinging about among the leafy branches of the *Eucalypti*, particularly those of a low or stunted growth, such as the thick forests of sapling and dwarf gum-trees growing on Kangaroo Island, one among the other localities in which it abounds.

Its note is loud, and very much resembles that of the *Ptilotis penicillata*. The stomach is small and membranous, and the food consists of insects of various kinds.

I did not succeed in discovering the nest.

The plumage of the upper surface harmonizes beautifully with the tint of the green leaves, among which it is always disporting.

The sexes are alike in their markings, but they differ considerably in size, the male being much less than her mate.

Upper surface and abdomen yellowish olive; crown of the head grey, streaked longitudinally with black; throat and chest black; ear-feathers pure silvery white; tips of the tail-feathers yellowish white; bill black; irides greenish grey, with a narrow ring of pale wood-brown; legs and feet leaden greenish grey.

The figures represent the two sexes of the natural size.



PTILOTIS AURICOMIS.

Yellow-tufted Honey-eater.

Yellow-tufted Flycatcher, Lath. Gen. Syn. Supp., vol. ii. p. 215.—Shaw, Gen. Zool., vol. viii. p. 172.

Certhia auriculata, Shaw, Gen. Zool., vol. viii. p. 236.

Muscicapa mystacea, Lath. Ind. Orn. Supp., p. li.?

Mustachoe Honey-eater, Lath. Gen. Syn. Supp., vol. ii. p. 221?—Ib. Gen. Hist., vol. iv. p. 177?

Muscicapa auricomis, Lath. Ind. Orn. Supp., p. xlix.—Steph. Cont. of Shaw's Gen. Zool., vol. x. p. 354.

L'Heorotaire à oreilles jaunes, Vieill. Ois. dor., tom. ii. p. 123. pl. 85.

Tufted-eared Honey-eater, Lath. Gen. Hist., vol. iv. p. 197.

Meliphaga auricomis, Vig. and Horsf. in Linn. Trans., vol. xv. p. 313.—Swains. Zool. Ill., vol. i. pl. 43.

By the list of synonyms given above, it will be seen that much doubt existed in the minds of the earlier writers on ornithology as to the place this bird should occupy in the natural system; the question was finally decided by Messrs. Vigors and Horsfield assigning it to its true station among the *Meliphagidæ*.

It is certainly one of the most beautiful as well as one of the oldest known species of the genus *Ptilotis*,—a genus, so far as is yet known, peculiar to Australia and New Guinea, the natural habitat of whose members is the evergreen *Eucalypti*, *Acaciæ*, &c.; and it is extremely interesting to observe how closely the plumage of the various groups of birds assimilates in colour to that of the flowers and leaves of the trees which they inhabit. I have often watched various species of this group among the leafy and flowering branches, busily engaged in gathering honey and insects, when the assimilation of the general tint of their plumage to the leaves, and their beautiful ornamental ear-coverts to the flowers, was very remarkable.

The Yellow-tufted Honey-eater is abundant in New South Wales, inhabiting at one season or other every portion of the country; the brushes near the coast, the flowering trees of the plains, and those of the sides and crowns of the highest hills towards the interior being alike tenanted by it. It is an active, animated species, flitting with a darting flight from tree to tree; threading the most thickly-leaved branches with a variety of sprightly actions; clinging beneath as well as traversing the upper side of the branch, for performing which its structure is beautifully adapted.

I never succeeded in finding the nest of this species, although, from its being very abundant on the Liverpool range at the period of the breeding-season, I can venture to state this to be one of the parts of the country in which it breeds, and that it evinces a decided partiality to mountain districts, and hence during great droughts suffers considerably from want of water; a fact I witnessed many times during my visit to the mountains during the great drought of 1839: all the gulleys and water-courses were then exhausted, and the natural beds of the rivers were as dry as the most arid plains; and the deep clefts and fissures in the rocks were the only resource for those animals of the forest to whom water was essential to their existence. To these natural basins this bird resorted in flocks of countless numbers, arriving in a famishing state, not only in the morning and evening but at all hours of the day, dashing down to drink quite regardless of my presence, although seated within two yards of them.

The female of this species, as is the case with others of the genus, is smaller than her mate, but exhibits no difference whatever in the colouring of her plumage.

Crown of the head olive-yellow; throat bright yellow; a black line commences at the base of the bill, surrounds the eye, and extends over the ear-coverts; behind the ear springs a lengthened tuft of rich yellow feathers; upper surface, wings and tail dark brown, with a tinge of olive; primaries and tail-feathers margined with olive-yellow; chest and under surface brownish yellow; bill black; irides reddish brown; feet blackish brown.

The Plate represents a male and a female on a branch of the *Tecoma Australis*, of the natural size.



PTILOTIS CRATITIUS, *Gould.*

Wattle-cheeked Honey-eater.

Ptilotis cratitius, Gould in Proc. of Zool. Soc., Part VIII. p. 160.

I FIRST met with this new species of Honey-eater on the 26th of June, 1839, on the ranges near the Upper Torrens in South Australia : it appeared to be a most pugnacious bird, driving every other species from the tree upon which it was feeding. I afterwards met with it on Kangaroo Island and in the Belts of the Murray. In all these situations it evinced a decided preference for the *Eucalypti*, among the smaller branches and flowers of which it was busily engaged in extracting pollen and honey from the flower-cups. The trees in the Belts of the Murray and on Kangaroo Island are of a dwarf character, while those of the Upper Torrens are very lofty ; yet each appeared to be equally resorted to.

I have never seen this bird from any other parts of Australia than those I have mentioned ; further research may, however, enable us to assign to it a much greater range of habitat. It is very closely allied to the *Ptilotis auricomis*, but may at all times be distinguished from that, as well as from every other known species of the group, by the lengthened wattle, of a beautiful lilac-colour, which stretches from the corner of the mouth and extends down the sides of the cheeks ; after death, this wattle, which is but slightly pendulous, becomes dry and discoloured, so as to be scarcely distinguishable.

Of its nidification no information could be obtained.

The sexes are nearly alike in plumage, and both have the fleshy appendage on the cheeks, but the female is somewhat smaller than her mate.

Crown of the head grey ; all the upper surface olive-green ; wings and tail brown, margined with greenish yellow ; lores, a large space surrounding the eye and the ear-coverts black, below which is a narrow line of bright yellow ; from the gape, down each side of the throat for five-eighths of an inch, a naked fleshy appendage, free at the lower end, of a beautiful lilac-colour and very conspicuous in the living bird ; anterior to this is a tuft of bright yellow feathers ; throat and under surface olive-yellow ; irides and eyelash black ; bill black ; feet blackish brown tinged with olive.

The Plate represents a male and a female on a branch of the beautiful *Prostanthera lasianthos*, of the natural size.



PTILOTIS ORNATUS, *Gould.*

Graceful Ptilotis.

Ptilotis ornatus, Gould, in Proc. of Zool. Soc., Part VI., 1838, p. 24.—Ibid, Syn. Birds of Australia, Part IV.

THE first notice of this species of Honey-eater may be found in the "Proceedings of the Zoological Society for 1838," as quoted above. The specimen there characterized was the only one I had then seen, and formed part of the fine collection of Fort Pitt at Chatham. It was received from Western Australia, where the species appears to be plentiful, being common at Swan River, and in all probability over the whole of the present unknown country between that place and the River Murray in South Australia, as I found it inhabiting the extensive belts of dwarf *Eucalypti* and other singular shrub-like trees which border the lower part of that river, and this may possibly be the extreme limit of its range in that direction. It was a source of much gratification to myself to have unexpectedly found this elegant little bird in the rich arboretum, which had already supplied me with so many novelties, both animal and vegetable: among the latter I found the plant figured in the accompanying Plate (*Pittosporum salicifolium*, R. Brown), not as one to which the bird gives preference, but upon which it was occasionally seen; the *Eucalypti* being the trees to which the birds of this genus more especially resort, among whose thick leafy branches and blossoms they may at all times be observed actively engaged in searching for insects, upon which, and the pollen and saccharine juices of the flowers, they almost solely subsist. In the Belts of the Murray it was confined to trees of a dwarf growth, while in the country in the neighbourhood of Swan River I am informed it is seen on the topmost branches of the gum- and mahogany-trees, clinging and flitting about the blossoms, not unfrequently descending to the ground, and hopping about beneath the branches and near the boles of the larger trees, doubtless in search of insects.

It has rather a loud ringing and not unpleasing song, which is constantly poured forth.

The nest is generally suspended from a horizontal forked branch, frequently in an exposed situation, and is of a neat, small, open, cup-shaped form, composed of fine vegetable fibres and grasses matted together with spiders' webs, and sometimes wool. The eggs are either two or three in number, of a deep salmon colour, becoming paler at the smaller end and minutely freckled with reddish brown, particularly at the larger end; they are nine lines long by seven broad.

The female differs from the male in being somewhat less in size, and those I collected had the nostrils, eyelash and basal portion of the bill orange instead of black, as in the male; still I am not fully satisfied that this orange colouring may not indicate immaturity, and that the fully adult female may not have these, as in her mate.

Crown of the head, external edge of the wings, rump and tail-feathers olive; back olive-brown; all the under surface greyish white, each feather having a longitudinal mark of brown down the centre; under tail-coverts lighter; on each side of the neck a lengthened tuft of rich yellow feathers; eye black, surrounded in the male by a narrow black eyelash except for a third of the space, behind which is yellow; feet purplish brown; bill black.

The figures are of the natural size.



PTILOTIS PLUMULUS, *Gould.*

Plumed Ptilotis.

Ptilotis plumulus, Gould, in Proc. of Zool. Soc. November 10, 1840.

THE double tuft of black and yellow feathers situated on the sides of the neck suggested the name of *plumulus* for this species, whose range of habitat appears to be confined to the western portions of Australia, specimens never having been seen in any of the numerous collections from the southern or from the north-west coast: had it advanced so far to the eastward as the Belts of the Murray, in all probability I should have discovered it, while investigating that region. In size it is rather less than *Ptilotis ornatus*, and, independently of the accessory black tuft on the sides of the neck, the breast is of a more delicate and paler colour, with the feathers much more faintly marked with brown down the centre. All the specimens I have were collected in the district of York, about 60 miles eastward of Swan River, where it inhabits the white-gum forests, resorting to the tops of the highest trees, and is seldom to be seen on the ground. Its note is much varied, consisting of a loud shrill shake, somewhat resembling the sportsman's pea-whistle, continued without intermission for a great length of time. When disturbed it flits among the branches with a quick darting flight; while at other times, like the Miners (genus *Myzantha*), it soars from tree to tree with the most graceful and easy movement.

Its small, elegant, cup-shaped nest is suspended from a slender horizontal branch, frequently so close to the ground as to be reached by the hand; it is formed of dried grasses lined with soft cotton-like buds of flowers. The breeding-season continues from October to January; the eggs being two in number, ten lines long by seven lines broad, of a pale salmon colour, with a zone of a deeper tint at the larger end, and the whole freckled with minute spots of a still darker hue. The stomach is diminutive and slightly muscular, the food consisting of insects and honey.

The sexes appear to present no difference in the colour of their plumage; but the female, as is the case with the other members of the genus, is considerably smaller than her mate.

Crown of the head and all the upper surface bright olive-yellow, approaching to grey on the back; lores black; ear-coverts, throat and under surface pale yellowish grey, faintly striated with a darker tint; behind the ear two tufts, the upper of which is narrow and black; the lower, which is more spread over the sides of the neck, of a beautiful yellow; primaries and tail-feathers brown, margined with bright olive-yellow; irides very dark reddish brown; bill black; legs and feet apple-green.

The figures are male and female of the natural size, on one of the Acacias of Western Australia.



PTILOTIS FLAVESCENS, *Gould.*

Yellow-tinted Honey-eater.

Ptilotis flavescens, Gould in Proc. of Zool. Soc., Part VII. p. 144.

THE only example of this new species that I have seen is from the north coast of Australia, where it was procured and subsequently presented to me by my friend Benjamin Bynoe, Esq., late of Her Majesty's Surveying Ship the Beagle. It differs from all the other members of its genus in the uniform yellow colouring of its plumage, for which reason I have assigned to it the specific appellation of *flavescens*,—a term indicative of the colouring by which it may be readily distinguished from its congeners.

I regret to say that nothing whatever is at present known of its habits or economy.

Head and all the under surface delicate citron-yellow, the yellow prevailing over the head; immediately under the ear-coverts a spot of blackish brown, posterior to which is a spot of bright yellow; the remainder of the plumage olive-grey.

The figures are of the natural size.



PTILOTIS FLAVA, *Gould.*

Yellow Honey-eater.

Ptilotis flava, Gould in Proc. of Zool. Soc., Part X. p. 136.

THIS new species may be distinguished from all its congeners by the uniform colouring of its plumage ; it is in fact a most remarkable bird, inasmuch as I scarcely recollect one similarly coloured in any genus that has come under my notice. I regret that, as regards the history of this Honey-eater, its range over the Australian continent, its habits and economy, all is a perfect blank ; a single specimen is all I have at present seen ; this was procured by one of the officers of Her Majesty's Ship the Beagle, while employed on the north coast. The names of Captain Stokes, Lieutenant Emery and Mr. Bynoe have been repeatedly mentioned in this work, with feelings of personal gratification that their labours have been useful to science. It now only remains for me to describe the colours of this bird ; having I trust thrown out a sufficient hint to those who may visit its native country, and may have opportunities of observing it, that any contributions to its history will be very desirable.

Head and all the under surface delicate citron-yellow, the yellow prevailing over the head ; immediately under the ear-coverts is a spot of blackish brown, posterior to which is a patch of bright yellow, the remainder of the plumage olive-grey.

The Plate represents the bird in two positions of the natural size.



PTILOTIS PENICILLATUS, *Gould.*

White-plumed Honey-eater.

Meliphaga penicillata, Gould in Proc. of Zool. Soc., Part IV. p. 143 ; and in Syn. Birds of Australia, Part I.

THIS species, which is rarely met with in New South Wales, is very abundant in South Australia ; I met with it even in the streets and gardens of Adelaide, where it strongly reminded me of the Sparrow of our own island ; and it doubtless enjoys a wide range over the interior of the country. From what I observed of its habits, it appears to differ from the generality of Honey-eaters in the partiality it evinces for the ground ; for although most of its time is spent among the leafy branches of the gums and wattles, where its movements are characterized by ease and grace, it is often to be seen hopping about under the trees in search of insects and seeds, which with the pollen of the flowers of the *Eucalypti* and *Acaciæ* constitute its food.

Its silvery white neck-plumes present a character by which it is at once distinguished from all other known species. The smaller size of the female is the only external difference between the sexes, for when fully adult their markings are precisely alike. Some of the specimens killed had the bill entirely black, while others had the base of that organ of a yellowish white, which is doubtless indicative of immaturity.

Its slightly-constructed nest, formed of grasses and wool, is cup-shaped, and is suspended by the rim, like those of the other Honey-eaters ; I ascertained that the eggs are two in number, but unfortunately did not succeed in procuring specimens of them.

The figures in the accompanying Plate represent the birds coloured so closely after nature as to render the following description almost unnecessary. The beautiful tree upon which they are placed is one of the numerous Acacias that abound in the interior of the country.

Sides of the face and ear-coverts pale yellow ; behind the ear-coverts a small tuft of white silky feathers ; upper surface rich yellowish grey, the outer edges of the quill- and tail-feathers tinged with a richer colour ; under surface light yellowish brown ; bill black ; legs purplish flesh-colour ; irides very dark brown.

The figures are of the natural size.

W. H. B. Clarke



PTILOTIS FUSCUS, *Gould.*

Fuscous Honey-eater.

Meliphaga fusca, Gould in Syn. Birds of Australia, Part II.

Ptilotis fusca, Ib., Part IV.

THIS species of Honey-eater, which is not distinguished by any brilliancy in its plumage, is abundantly dispersed over the thick brushes of New South Wales; and in the months of August and September, when the beautiful *Tecoma* upon which it is figured is in blossom, it may be seen flitting about among the thick clusters of the pendent flowers in search of insects, which are sometimes captured while on the wing, but more generally extracted from the tubular florets.

I observed nothing remarkable in its economy, or in which it differed from the other members of the group. Like them it is generally found among the flowers and the most leafy branches of the trees. I have never seen it on the plains, nor have I received specimens from any other part of Australia than New South Wales, where it is to be met with both in winter and summer.

The sexes are very nearly alike in colouring; in fact, with the exception of the female being a trifle smaller than her mate, no outward distinction is visible.

The whole of the upper surface greyish brown with a tinge of olive; a ring of black feathers surrounds the eye; ear-coverts blackish brown; behind the ear a small patch of yellow; throat, chest, and under surface light greyish brown; irides light yellow; eyelash bright yellow; gape and corners of the mouth yellow; bill dull yellow at the base and black at the tip; feet fleshy brown.

The Plate represents a male and female of the natural size on the *Tecoma Australis*.



PTILOTIS CHRYSOPS.

Yellow-faced Honey-eater.

Sylvia chrysops, Lath. Ind. Orn. Supp., p. liv.—Bonn. et Vieill. Ency. Méth. Orn., part ii. p. 455.

Black-cheeked Honey-eater, Lath. Gen. Syn. Supp., vol. ii. p. 248.—Id. Gen. Hist., vol. iv. p. 196.

Meliphaga chrysops, Vig. and Horsf. in Linn. Trans., vol. xv. p. 315.—Jard. and Selb. Ill. Orn., vol. i. pl. xxxv.

fig. 1.—Less. Man. d'Orn., tom. ii. p. 73.

Yellow-eared Flycatcher, White's Voy., pl. in p. 161 ?

THE *Ptilotis chrysops* may be regarded as one of the commonest species of Honey-eaters inhabiting the colonies of New South Wales and South Australia; its distribution over those countries, particularly the former, being almost universal. On reference to my journal I find that it was equally abundant in the gardens of Sydney, in the brushes near the coast, in the district of the Upper Hunter and on the Liverpool range; and that in South Australia it was quite as numerous in the mangrove thickets on the coast, as in the interior of the country. No instance is on record of its occurrence in Van Diemen's Land, nor can the colonies of Swan River on the western, or Port Essington on the northern coast of Australia, claim a place for it in their faunas; its range, in fact, appearing to be confined to the south-eastern part of the country. It is very animated and sprightly in its actions, and during the months of spring and summer is constantly engaged in singing; its melodious song, which much resembles, but is not so loud as that of the Song Thrush of Europe, being poured forth while the bird is perched on the topmost branches of the trees.

A nest found near the Liverpool range in October was very neatly constructed, rather small in size, round, and open in form, and so thin that I could see through it; it was suspended to the fine twigs of a *Casuarina* at some height from the ground, while another suspended to the lower branches of a sapling gum was within reach of the hand. They were outwardly composed of the inner bark of trees, moss, etc., lined with fine vegetable fibres and grasses. The eggs, which are two and sometimes three in number, are of a lengthened form, and of a deep reddish buff, strongly marked at the larger end with deep chestnut-red and purplish grey; the remainder of the surface ornamented with large spots and blotches of the same colour, somewhat thinly dispersed; their medium length is ten lines and a half by seven lines in breadth.

The sexes are so much alike that no visible difference is perceptible, except in the smaller size of the female.

Crown of the head, back of the neck, all the upper surface, wings and tail dark brown with a slight tinge of olive; throat and under surface dark greyish brown, the latter colour predominating on the chest; a fine line of black runs from the nostrils through the eye; this black line is bounded below by a stripe of yellow which runs under the eye and over the ear-coverts, and below this runs another parallel line of black, which commences at the base of the lower mandible and extends beyond the line of the ear-coverts; immediately above the eye behind is a small spot of yellow, and behind the ear-coverts a like spot of white; bill blackish brown; irides and eye-lash dark brown; legs leaden brown.

The Plate represents the two sexes of the natural size.



PTILOTIS UNICOLOR, *Gould.*

Uniform Honey-eater.

Ptilotis unicolor, Gould in Proc. of Zool. Soc., Part X. p. 136.

ALTHOUGH I have placed this species in the genus *Ptilotis*, it is more than probable that it will hereafter be found necessary to constitute it the type of a distinct form, as on a careful comparison it will be seen that it differs from the true *Ptiloti* in some parts of its structure and in the uniform colouring of its plumage; besides which, its habits and manners are also somewhat different. It is one of the many species that rewarded Mr. Gilbert's researches at Port Essington; where he states it was seldom met with in the immediate vicinity of the harbour, but that it gradually increased in number as he approached the narrow neck of the peninsula and the mainland about Mountnorris Bay. The situations in which it was usually observed were those adjacent to swampy thickets, and here it was generally seen in pairs: it appears to be of a most lively disposition, being always in motion; its actions much resemble those of the *Tropidorhynchus argenteiceps*, with which bird it often fights severe battles. When among the trees its movements are very amusing, and its agility in running upon and creeping round the branches in search of insects is fully equal to that of the *Sittellæ*. Its flight is very short, feeble and peculiar, rarely extending to a greater distance than from branch to branch or from tree to tree, and is performed with a very rapid motion of the wings; the tail being at the same time much retroverted over the back, gives the bird a most ludicrous appearance. It emits a great variety of notes and calls; frequently giving utterance to a loud chattering cry much resembling that of the *Myzanthæ*, but more often a note so similar to the well-known chirrup of the common English Sparrow, that it might be easily mistaken for the note of that bird.

The stomach is diminutive but muscular, and the food consists of honey, insects of various kinds, seeds and berries.

Lores and orbits deep brown; all the plumage brownish olive; the under surface paler than the upper; primaries margined with brighter olive than the other parts of the body; under surface of the shoulder pale buff; irides obscure red; bill dark olive-brown; naked gape fleshy white, passing into yellow at the corner of the mouth; legs and feet light ash grey.

The Plate represents the bird of the natural size.



PLECTORHYNCHA LANCEOLATA, *Gould.*

Lanceolate Honey-eater.

Plectorhyncha lanceolata, Gould in Proc. of Zool. Soc., Part V. p. 153 ; and in Syn. of Birds of Australia, Part IV.

THE Liverpool Plains and the country immediately to the northward thereof are, I believe, the only portions of the Australian continent in which this bird has been seen. I found it rather sparingly dispersed over the forests bordering the rivers Mokai and Namoi, and it appeared to increase in number as I descended the latter stream towards the interior. It was generally observed alone, or in pairs, keeping almost exclusively to the *Acaciæ* and *Eucalypti*. Its chief food is the pollen of flowers and insects, for the procuring of which among the blossoms, and for constructing its beautiful nest, its pointed spine-like bill is admirably adapted. I find it stated in my notes taken on the spot, that this bird possesses the peculiar habit of sitting motionless among the thickest foliage of the topmost branches of the highest trees, where it cannot be seen without the closest observation, although its immediate locality is indicated by its powerful whistling note ; I have also heard these notes uttered by the bird while on the wing. Upon one occasion only did I discover its nest, which was suspended from the extreme tip of a branch of a *Casuarina* overhanging the stream, and in which the female was sitting, as represented in the Plate. The nest is outwardly composed of grasses, interwoven with wool and the cotton-like texture of flowers. The eggs are two in number, rather lengthened in shape, being eleven and a half lines long by eight lines broad ; they are of a flesh-white, very minutely sprinkled with reddish buff, forming an indistinct zone at the larger end. So closely do the sexes resemble each other in colour, that dissection alone will enable us to distinguish them ; the male, however, rather exceeds the female in size.

The young, of which I killed several specimens in the month of January, had even at that early age assumed the general markings of the adult ; and from the circumstance of there being fully-fledged young and eggs at the same time, proves that these birds rear at least two broods in the season.

Crown of the head, ear-coverts, and back of the neck mottled with black and white, a longitudinal mark of black running down the centre of each feather ; throat and under surface greyish white, the stem of each feather, which ends lanceolate, pure white ; back, wings and tail light brown ; irides brown ; bill dark bluish horn-colour ; legs and feet light blue.

The figures are those of a male and a female, and a nest, of the natural size.



ZANTHOMYZA PHRYGIA, Swains.

Warty-faced Honey-eater.

- Merops Phrygius*, Lath. Ind. Orn. Supp., p. xxxiv.—Shaw, Zool. of New Holl., p. 13. pl. 4.—Vieill. 2nde édit. du Nouv. d'Hist. Nat., tom. xxvii. p. 428.
Philedon, Temm. Men., 2nde édit., tom. i. p. lxxxvii.
Warty-faced Honey-eater, Lewin, Birds of New Holl., pl. 14.
Black and Yellow Bee-eater, Lath. Gen. Syn. Supp., vol. ii. p. 154.
Black and Yellow Honey-eater, Lath. Gen. Hist., vol. iv. p. 165.
Embroidered Bee-eater, Shaw, Gen. Zool., vol. viii. p. 167. pl. 20.
Philemon Phrygius, Vieill. Ency. Méth., Part II. p. 617.
Le Merle écaillé, Le Vaill. Ois. d'Afr., tom. iii. pl. 116.
Meliphaga Phrygia, Lewin, Birds of New Holl., p. 13. pl. 4.—G. R. Gray, Gen. of Birds, 2nd Edit., p. 20.
Anthochaera Phrygia, Vig. and Horsf. in Linn. Trans., vol. xv. p. 322.
Zanthomiza Phrygia, Swains, Class. of Birds, vol. ii. p. 326.
Mock Regent Bird, Colonists of New South Wales.
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THIS is not only one of the handsomest of the Honey-eaters, but is also one of the most beautiful birds inhabiting Australia, the strongly contrasted tints of its black and yellow plumage rendering it a most conspicuous and pleasing object, particularly during flight. It is a stationary species, and enjoys a range extending from South Australia to New South Wales; I also met with it in the interior nearly as far north as the latitude of Moreton Bay. Although it is very generally distributed, its presence appears to be dependent upon the state of the *Eucalypti*, upon whose blossoms it mainly depends for subsistence; it is consequently only to be found in any particular locality during the season that those trees are in full bloom. It generally resorts to the loftiest and most fully-flowered tree, where it frequently reigns supreme, buffeting and driving every other bird away from its immediate neighbourhood; it is, in fact, the most pugnacious bird I ever saw, evincing particular hostility to the smaller *Meliphagidæ*, and even to others of its own species that may venture to approach the trees upon which two or three have taken their station. While at Adelaide, in South Australia, I observed two pairs that had possessed themselves of one of the high trees that had been left standing in the middle of the city, which tree during the whole period of my stay they kept sole possession of, sallying forth and beating off every bird that came near. I met with it in great abundance among the brushes of New South Wales, and also found it breeding in the low apple-tree flats of the Upper Hunter. I have occasionally seen flocks of from fifty to a hundred in number, passing from tree to tree as if engaged in a partial migration from one part of the country to another, probably in search of a more abundant supply of food.

Its note is a peculiar loud whistle, not entirely devoid of harmony.

The nest, which is usually constructed on the overhanging branch of a *Eucalyptus*, is round, cup-shaped, about five inches in diameter, composed of fine grasses, and lined with a little wool and hair. The eggs are two in number, of a deep yellowish buff, marked all over with indistinct spots and irregular blotches of chestnut-red and dull purplish grey, particularly at the larger end, where they frequently form a zone; they are eleven lines long by eight lines and a half broad.

The stomachs and intestines of those specimens that I killed and dissected among the brushes of the Hunter were entirely filled with liquid honey only; insects, however, doubtless form a considerable portion of their diet.

The sexes are nearly alike in colouring, but the female is much smaller than the male, and the young are destitute of the warty excrescences on the face, that part being partially clothed with feathers.

Head, neck, upper part of the back, chin and chest black; scapularies black, broadly margined with pale yellow; lower part of the back black, margined with yellowish white; upper tail-coverts like the scapularies; wings black, the coverts margined with yellow; spurious wing yellow; primaries black, with an oblong stripe of yellow occupying the margin of the outer and a portion of the inner web next the quill, which is black; secondaries black, broadly margined on the outer web with yellow; under surface black, with an arrow-shaped mark of yellowish white near the extremity of each feather; two centre tail-feathers black, slightly tipped with yellow; the remainder black at the base, and yellow for the remainder of their length, the black decreasing and the yellow increasing as the feathers recede from the two central ones; irides reddish brown; bill black; feet blackish brown; warty excrescences covering the face dirty yellowish white.

The figures represent two males, a female, and the nest of the natural size.



MELICOPHILA PICATA, Gould.

Pied Honey-eater.

Melicophila picata, Gould in Proc. of Zool. Soc., April 9, 1844.

THE accompanying illustration represents an entirely new species of Honey-eater, differing both in form and in colouring from every other at present known; in the pied style of its plumage it so strongly resembles the *Petroica bicolor*, that it might be easily mistaken for that bird; its structural difference is, however, so apparent on comparison that no doubt can for a moment be entertained as to its proper situation in the 'Systema Avium.' Its flight is also very different from that of the *Petroica bicolor*. Like many other of the Honey-eaters, its actions when on the wing are extremely varied, and some of them exceedingly graceful; it frequently ascends in a perpendicular direction to a considerable height above the trees with its tail very much spread, when the contrast presented by its black and white plumage renders it a conspicuous and pleasing object. It is at all times exceedingly shy, and invariably perches on the top of an isolated bush or dead branch. It usually utters a peculiar plaintive note, slowly repeated several times in succession; it also emits a single note, which so closely resembles that of the *Myzomela nigra*, as to be easily mistaken for it. It is at all times extremely difficult of approach, particularly the female, which, if possible, is even more shy and wary than her mate. Mr. Gilbert mentions, that unlike the other members of the family, this species assembles in vast flocks, which continue soaring about during the greater portion of the day. It is a periodical visitant to Western Australia, where it arrives simultaneously with the *Artamus personatus* and *Melopsittacus undulatus* in the latter part of October.

Specimens of this bird have been forwarded to me from South Australia by my excellent friend George Grey, Esq., Governor of that province, and from Swan River by Mr. Gilbert; they reached me simultaneously, the latter fortunately in good order, the former sadly mutilated "by a cat," writes His Excellency, "which got into the room and ate the heads off the male and female of this entirely new bird, of which I have no other, and which I had ridden fifty miles to procure." One of Mr. Gilbert's specimens had been given to him by Mr. Lock Burgess, to which gentleman I am also indebted for several other rare species kindly presented by him to Mr. Gilbert for me, whereby the interest and value of this work is much enhanced.

I regret to say that nothing more than is stated above is present at known respecting it.

The male has the head, throat, sides of the chest, back, wings, inner webs of the upper tail-coverts, two centre and the tips of the remaining tail-feathers black; the wing-coverts, the base and the margins of both webs of the secondaries, the rump, outer webs of the upper tail-coverts, the under surface and the lateral tail-feathers for three-fourths of their length pure white; irides reddish brown; bill bluish grey, becoming black on the culmen near the tip; naked skin beneath the eye ash grey; legs and feet greenish grey.

The female is light brown, each feather being darkest in the centre; wings and tail dark brown, the former margined with buffy white; under surface buffy white, with a small streak of black near the tip of each feather.

The figures represent a male and a female of the natural size.



Bill deep pink red.
 Egg House Red Head

ENTOMOPHILA PICTA, *Gould.*

Painted Honey-eater.

Entomophila picta, Gould in Proc. of Zool. Soc., Part V. p. 154.

THIS beautiful little Honey-eater is strictly peculiar to the interior of New South Wales, where it inhabits the myalls (*Acacia pendula*), and other trees bordering the extensive plains of that part of Australia. On a comparison of skins of this species with those of the other *Meliphagidae*, prior to my visit to the country, I had been led to suspect that the actions and economy of the Painted Honey-eater would be found to differ materially from those of the other members of its family, and such proved to be the case, for it is much more active among the branches, captures insects on the wing, and darts forth and returns to the same spot much after the manner of the Flycatchers. Its song is a loud but not very harmonious strain, which is frequently uttered when on the wing. I have generally met with it in pairs, flying and chasing each other from top to top of the most lofty trees. During flight they repeatedly spread their tails, when the white portion of the feathers shows very conspicuously; the yellow colouring of the wing also contributes to the beauty of their appearance, which somewhat resembles that of the Goldfinch. I found the nest of this bird with two nearly fledged young on the fifth of September; the nest was the frailest structure possible, round, of small size, most ingeniously suspended by the rim to the thick drooping leaves of the *Acacia pendula*, and entirely composed of very fine fibrous roots. The female is much less brilliant than the male, but does not differ in the distribution of the markings.

I have never seen this bird from any other part of Australia than that above mentioned, nor in any other collection than my own.

Head, cheeks, and all the upper surface black, the posterior edges of the ear-coverts tipped with white; wings black, the outer edges of the primaries and secondaries rich yellow at their base, forming a conspicuous broad mark on the wing; tail black, margined externally with rich yellow, each feather except the two centre ones more or less largely tipped on the internal web with white; throat and all the under surface white, the flanks having a few longitudinal faint spots of brown; bill soft and pulpy, and of a deep pink red; irides hazel; eyelash darker hazel; feet purplish lead-colour.

The figures represent the two sexes and the nest of the natural size.



ENTOMOPHILA ALBOGULARIS, *Gould.*

White-throated Honey-eater.

Entomophila? albogularis, Gould in Proc. of Zool. Soc., part x. p. 137.

Me-lud-be-re, Aborigines of Port Essington.

This new species is a native of the northern portion of Australia. "I first met with it," says Mr. Gilbert, "on Mayday Island (in Van Diemen's Gulf), where it appeared to be tolerably abundant; I afterwards found it to be equally numerous in a large inland mangrove swamp near Point Smith. It is an extremely active little bird, constantly flitting from branch to branch and taking irregular flights, during which it utters its pretty Goldfinch-like song; it also pours forth its agreeable melody for a length of time without intermission while sitting on the topmost branches of the trees. I never observed it in any other than swampy situations, or among the mangroves bordering the deep bays and creeks of the harbours; small breaks in the mangroves formed by little coves or bays having a narrow entrance, and thus secluded from the effects of every wind, are the situations it chooses for the purpose of rearing its young. Its small pensive nest is suspended from the extremity of a weak projecting branch in such a manner that it hangs over and at about two feet from the water, the bird always selecting a branch bearing a sufficient number of leaves to protect the entrance, which is invariably at the top. In form the nest is deep and cup-like, and is composed of narrow strips of the soft paper-like bark of the *Melaleuca*, matted together with small vegetable fibres, with which also the nest is firmly bound to the branch; the inside is slightly lined with soft grass. The eggs appear to vary from two or three in number, as I found a nest in the latter part of November, and another in the early part of December, which contained three in each, while a third, procured towards the end of January, had only two; they are rather lengthened in form, and not very unlike those of *Malurus cyaneus* in the colour and disposition of their markings—their ground-colour being white, thinly freckled all over with bright chestnut-red, particularly at the larger end; they are nine lines long and six lines broad. During the breeding-season it exhibits considerable pugnacity of disposition, and, instead of its usual pretty note, utters a chattering and vociferous squeaking; at other times it is rather familiar and may be easily approached.

"The stomach was very small, but tolerably muscular, and its food consisted of insects generally."

Head dark grey; all the upper surface brown; wings and tail darker brown; primaries, secondaries, and basal half of the tail-feathers margined with wax-yellow; throat pure white; chest and flanks reddish buff; centre of the abdomen and under tail-coverts white; irides bright reddish brown; bill blackish grey; feet bluish grey.

The figures are those of the two sexes, and the nest, of the natural size.



ENTOMOPHILA RUFOGULARIS, *Gould.*

Red-throated Honey-eater.

Entomophila rufogularis, Gould in Proc. of Zool. Soc., Part X. p. 137.

THIS is another of the novelties that has rewarded the researches of the Officers of H.M.S. Beagle on the northern coast of Australia ; the specimens from which my figures were taken were transmitted to me by my friend Benjamin Bynoe, Esq., of that vessel.

The *Entomophila rufogularis* is the least of the genus yet discovered, and is more nearly allied to *E. albogularis* than to *E. picta*, from both of which it may at once be distinguished by the red colouring of its throat. The sexes, judging from the specimens sent me by Mr. Bynoe, are very similar in their markings.

Nothing whatever is known of its habits and economy.

Head and all the upper surface brown ; wings and tail darker brown ; primaries, secondaries and tail-feathers margined externally with wax-yellow ; throat rust-red ; sides of the head and all the under surface very pale brown ; bill and feet dark purplish brown.

The figures are those of the natural size.



ACANTHOGENYS RUFOGULARIS, Gould.

Spiny-cheeked Honey-eater.

Acanthogenys rufogularis, Gould in Proc. of Zool. Soc., Part V. p. 153; and in Syn. Birds of Australia, Part IV.

NUMEROUS and diversified as are the forms of the great family of the *Meliphagidæ*, the present species has always appeared to me more than usually interesting, because in the first place few are more elegantly formed, and in the second it differs widely from all others in plumage, and in the singular spiny processes which adorn its cheeks and ear-coverts. In its habits and general economy it bears a close alliance to the Wattle-birds (*Anthochaeræ*), but still presents in these respects sufficient differences to warrant its separation into a distinct genus or subgenus, as naturalists may think fit to designate the division.

The Spiny-cheeked Honey-eater ranges very widely over the interior of Australia. I observed it to be very numerous on the Lower Namoi to the northward of the Liverpool Plains in New South Wales. It was the commonest species of Honey-eater I encountered in the interior of South Australia; and I have also received a pair of this or a closely allied species from the interior of Western Australia; as, however, some difference exists between these latter and the birds from New South Wales, I refrain, until I have seen other examples, from stating that it goes so far to the westward as the Swan River Settlement. It is not at all improbable that there may be two or more species of this singular form. Like the Brush Wattle-bird it is rather a shy species, but its presence may at all times be detected by the loud hollow whistling note which it frequently utters while on the wing, or while passing with a darting diving flight from tree to tree. It appears to give a decided preference to the Banksia and other trees growing upon sandy soil; its presence therefore is a certain indication of the poverty of the land in the immediate neighbourhood. It is very active among the trees, clinging and creeping about with the greatest ease and elegance of position, passing its brush-like tongue over the flowers of the Banksias as well as inserting it into the interstices for lurking insects, upon which, like all the other Honey-eaters, it partially subsists.

The nest, which is a round, rather deep, cup-shaped structure, is suspended from a fine branch of a low tree, and is composed of long wiry grasses, and now that the sheep is a denizen of the country, matted together both internally and externally with wool. The eggs are three in number, of a dull olive-buff, strongly dotted with deep chestnut-brown and bluish grey, the markings being most numerous at the larger end. Their average length is one inch, and breadth nine lines.

The sexes are so much alike, that, with the exception of the female being slightly inferior to her mate in size, no difference is perceptible.

Crown of the head, back and wings dusky brown, each feather margined with pale brown; upper tail-coverts with each feather dusky brown in the centre; stripe behind the eye and on the sides of the neck black, above which on the side of the neck another line of whitish mingled with dusky; hairs on the cheeks white; below the lower mandible a line of feathers, which are white crossed by black lines; throat and fore-part of the chest pale rufous; under surface dirty white, each feather striated with dusky brown; tail blackish brown, tipped with white; bare part of the face and base of the bill soft, pulpy, and of a pinky flesh-colour; irides bluish lead-colour; feet olive.

The Plate represents a male and female on a branch of one of the Banksias, all of the natural size.



ANTHOCHÆRA INAURIS.

Wattled Honey-eater.

Anthochæra carunculata, Vig. and Horsf. in Linn. Trans., vol. xv. p. 321.—Gould, Syn. Birds of Australia, Part I.
Creadion carunculatus, Vieill. Gal. des Ois., tom. i. pl. 94.
Wattle Bird of the Colonists of Van Diemen's Land.

By nearly every author who has had occasion to mention or refer to this species, it has been confounded with the bird originally described by Latham under the name of *Merops carunculatus*, which bird is strictly confined to New South Wales and South Australia, while that here figured is I believe exclusively an inhabitant of Van Diemen's Land; hence it becomes necessary to give the latter a new specific appellation, and I have selected that of *inauris* as indicative of the peculiar feature by which it is distinguished, namely the great length of the pendulous ear-drops. The vast primæval forests of *Eucalypti* clothing the greater portion of Van Diemen's Land, whose recesses in many parts have never yet been trodden, afford it an asylum not only where food is abundant, but where it is safe from the attack of man; from these retreats however it frequently emerges, and visits the flowering *Eucalypti* of the more open forest in the Upper Derwent districts, where forty or fifty individuals may be frequently seen on a single tree. Even in the vicinity of Hobart Town and the islands of South Arm and Bruny it may be observed, but in far less numbers, at all seasons of the year. The neighbourhood of the Macquarrie Plains is a locality particularly favourable to this bird, where hundreds are annually shot and sent to the markets of Hobart Town for the purposes of the table. It exhibits but little shyness of disposition, and almost any number may be obtained without much trouble. It is highly prized as an article of food, and in winter becomes so excessively fat as to exceed in this respect any bird I ever saw, the entire body and neck, both internally and externally, being completely enveloped. I have been informed that a large tea-cupful of oil may be procured from two of these birds, and that as it gives a better light, it is sometimes used in lieu of candles; after the breeding-season it becomes thin and spare, the male then weighing on an average only six ounces. This bird feeds almost exclusively on honey and the pollen of the *Eucalypti*; the only other food detected in its very diminutive stomach being the remains of coleopterous insects. Its whole structure is admirably adapted for procuring this kind of food; its long tongue, with its brush-like tip, being protruded at will into the honey-cups of the newly opened flowers, a succession of which appears with every rising sun throughout the year, upon one or other of the numerous species of *Eucalypti*.

The same restless disposition appears to be common to all the tribe of Honey-eaters, and this bird is as active and quick in its movements as the smallest of the genus, hanging and clinging to the branches in every possible variety of position; and when thirty or forty are seen on a single tree, they present a very animated appearance. Its flight, which seldom extends farther than from tree to tree, is very similar to that of the Magpie of Europe. Its note is a harsh and disagreeable scream, resembling in loudness and somewhat in tone the call of the Pheasant; by some persons it has been compared to the sound produced by the retching or vomiting of man. Both sexes have the wattled appendages beneath the ear, but they are less developed in the female, whose size is also smaller than that of her mate.

Although I found several of the nests of this species in various parts of the colony, I failed in procuring the eggs, which are still desiderata to my cabinet. The nests were moderately large cup-shaped structures, formed of fine twigs and grasses intermingled with wool, and were usually built on some low tree, such as the *Casuarina* or *Acacia*.

Crown of the head and back of the neck striped with black and grey, the centre of each feather being black, and its external edges grey; back and shoulders dusky brown, the shaft of each feather buffy white; wings deep blackish brown, the external margins of the primaries slightly, and the secondaries broadly fringed with grey; tips of all the primaries white; tail much graduated; the upper tail-coverts and two middle tail-feathers grey, the remainder blackish brown, and the whole tipped with white; chin and under tail-coverts white; throat, breast and flanks grey, each feather having a central mark of blackish brown, which is much enlarged on the lower part of the breast; centre of the abdomen rich yellow; bill black; corner of the mouth yellow; irides very dark brownish black; feet light flesh-colour; claws black; bare skin round the ear, and the upper part of the long pendulous wattle which hangs from below the ear white, gradually deepening into rich orange at its extremity.

The Plate represents the two sexes of the natural size.



ANTHOCHÆRA CARUNCULATA.

Wattled Honey-eater.

Merops carunculatus, Lath. Ind. Orn., vol. i. p. 276.

Corvus paradoxus, Lath. Ind. Orn. Supp., p. 26.

——— *carunculatus*, Shaw, Gen. Zool., vol. vii. p. 378.

Pie à pendeloques, Daud. Orn., tom. ii. p. 246. pl. 16.

Wattled Crow, Lath. Gen. Syn. Supp., vol. ii. p. 119.

Wattled Bee-eater, Lath. Gen. Syn. Supp., vol. ii. p. 150.—Phil. Bot. Bay, pl. in p. 164.—White's Journ., pl. in p. 144.—Shaw, Gen. Zool., vol. viii. p. 173.—Lath. Gen. Hist., vol. iv. p. 158.

Anthochæra Lewinii, Vig. and Horsf. in Linn. Trans., vol. xv. p. 322, note.—Gould in Syn. Birds of Australia. Part I.—Swains. Class. of Birds, vol. ii. p. 326.—G. R. Gray, List of Gen. of Birds, 2nd edit., p. 20.

Djung-gung, Aborigines of Western Australia.

Wattle Bird of the Colonists.

THIS, the true *Merops carunculatus* of the older writers, enjoys an unusually wide range of habitat, extending as it does over the whole of the southern portion of the continent, being equally as abundant in Southern and Western Australia as in New South Wales; how far it may extend to the northward has not yet been ascertained; it does not inhabit Van Diemen's Land. I observed it to be very numerous in all the high gum-trees around Adelaide, in most parts of the interior, and in all the apple-tree flats and forests of *Eucalypti* of New South Wales. Mr. Gilbert's notes inform me that he met with it in all parts of Western Australia, but that it was most abundant among the Banksias in the York district. It is a showy active bird, constantly engaged in flying from tree to tree and searching among the flowers for its food, which consists of honey, insects, and occasionally berries. In disposition it is generally shy and wary, but at times is confident and bold: it is usually seen in pairs, and the males are very pugnacious. Its habits and manners, in fact, closely resemble those of the *A. inawis*, and like that bird, it utters with distended throat a harsh disagreeable note.

Its flight is slow and uneven, and rarely extends to any great distance.

It breeds in September and October. The nests observed by myself in the Upper Hunter district were placed on the horizontal branches of the *Angophoræ*, and were of a large rounded form, composed of small sticks and lined with fine grasses; those found by Mr. Gilbert in Western Australia were formed of dried sticks, without any kind of lining, and were placed in the open bushes. The eggs are two or three in number, one inch and three lines long by ten lines and a half broad; their ground colour is reddish buff, very thickly dotted with distinct markings of deep chestnut and umber and reddish brown, interspersed with a number of indistinct marks of blackish grey, which appear as if beneath the surface of the shell: eggs taken in New South Wales are somewhat larger than those from Western Australia, and have markings of a blotched rather than of a dotted form, and principally at the larger end.

The sexes are only distinguishable by the smaller size of the female.

Crown of the head, a line running from the base of the bill beneath the eye and the ear-coverts blackish brown; space under the eye silvery white, bounded behind by an oblong naked flesh-coloured spot, below which is a short pendulous wattle of a pinky blood-red colour; back of the neck and all the upper surface greyish brown, each feather having a stripe of white down the centre; upper tail-coverts greyish brown, broadly margined with grey; primaries and secondaries deep blackish brown, the former slightly and the latter broadly edged with grey; all the primaries tipped with white; two middle tail-feathers greyish brown, the remainder deep blackish brown, the whole largely tipped with white; throat, breast and flanks grey, the centre of each feather being lighter; middle of the abdomen yellow; irides bright hazel-red; legs brownish flesh-colour; inside of the mouth yellow.

The figure is of the natural size.



ANTHOCHÆRA MELLIVORA, *Vig. and Horsf.*

Brush Wattle-Bird.

- Certhia mellivora*, Lath. Ind. Orn. Supp., p. xxxvii.
Le Goruck, Vieill. Ois. Dor., tom. ii. p. 126. pl. 88.
Goruck Creeper, Shaw, Gen. Zool., vol. viii. p. 243.
Mellivorous Creeper, Lath. Gen. Syn. Supp., vol. ii. p. 166.
Wattled Honey-eater, var. C. Lath. Gen. Hist., vol. iv. p. 159.
Merops chrysopterus, Lath. Ind. Orn. Supp., p. xxxiii.
Golden-winged Bee-eater, Lath. Gen. Syn. Supp., vol. ii. p. 153.—Shaw, Gen. Zool., vol. viii. p. 180.
Golden-winged Honey-eater, Lath. Gen. Hist., vol. iv. p. 160.
Mellivorous Honey-eater, Lath. Gen. Hist., vol. iv. p. 161.
Anthochæra mellivora, Vig. and Horsf. in Linn. Trans., vol. xv. p. 321.—Gould, Syn. Birds of Australia, Part I.
Goo-gwar-ruck, Aborigines of the coast of New South Wales.

THE student of nature cannot fail to observe that particular forms, both of birds and insects, are peculiarly and especially destined to inhabit certain districts, trees, and plants, and in no instance is this law more strikingly apparent than in the case of the Brush Wattle-bird, which so constantly resorts to the Banksias, that its presence may always be with certainty looked for wherever these trees may be found; indeed I do not remember ever having seen a group of them without having also seen or heard their sure accompaniment, the Wattle-bird; but I must remark, that I have occasionally observed the latter among the *Leptospermums* and other low shrubs of the swampy grounds. Neither of these trees, it is well known, are to be found on good land; the garrulous note of this species might, therefore, be taken by the settler as a sure indication of the sterile and unprofitable nature of the soil. It is indigenous to Van Diemen's Land, New South Wales, and South Australia; and in all these countries may be found in such situations as are favourable to the growth of its favourite trees. In the former country it is especially abundant on the banks of the Tamar, and in the belts of Banksias that stretch along the northern shores of that island. Among the places in which it is most numerous on the continent, are near the Port of Adelaide in South Australia; and Illawarra, Newcastle, and Sydney, in New South Wales. The Botanic Garden at the latter place, although in the midst of a populous city, is visited by great numbers of this bird, and I may mention that two of their nests with eggs, forming part of my collection, were taken from the shrubs growing on the borders of this place of public resort. It is but sparingly dispersed in the interior of New South Wales and South Australia: how far its range may extend to the westward of Spencer's Gulf I have had no means of ascertaining: I have never yet received it from Swan River or any part of the western coast, its place being there supplied by an intimately allied species, the *Anthochæra lunulata*.

The Brush Wattle-bird is a bold and spirited species, evincing a considerable degree of pugnacity, fearlessly attacking and driving away all other birds from the part of the tree on which it is feeding; and there are few of the Honey-eaters whose actions are more sprightly and animated. During the months of spring and summer the male perches on some elevated branch and screams forth its harsh and peculiar notes, which have not unaptly been said to resemble a person in the act of vomiting, whence the native name of *Goo-gwar-ruck*, in which the natives have endeavoured to imitate this very singular note. While thus employed it frequently jerks up its tail, throws back its head, and distends its throat, as if great exertion was required to force out these harsh and guttural sounds.

The Banksias are in blossom during a great portion of the year, and each flower as it expands is diligently examined by the Wattle-bird, which inserts its long feathery tongue into the interstices of every part of the flower, extracting the pollen and insects, in searching for which it clings and hangs about the flowers in every variety of position.

The breeding season commences in September and continues during the three following months. The nest is round, open, and rather small in size, generally placed in the fork of a small branch often within a few feet of the ground, and formed of fine twigs lined with fibrous roots.

The eggs are two and sometimes three in number, of a beautiful salmon colour, strongly blotched at the larger end, and here and there over the remainder of the surface with deep chestnut-brown; thirteen lines long by nine lines broad.

The sexes are only to be distinguished from each other by the smaller size of the female; and the young from the nest has all the marks of the adult, but much less apparent.

All the upper surface dark brown, each feather marked down the centre with a minute line of white; primaries chestnut-brown on the inner webs for three parts of their length from the base; outer webs and remainder of the inner brown tipped with white; secondaries, wings, and tail-coverts greyish brown tipped with white; tail brown, tinged with olive, and all the feathers tipped with white; feathers of the throat and chest blackish brown at the base and white at the tip; feathers of the under surface the same as the upper, but with the white mark broader and more conspicuous; bill black; irides grey; feet vinous brown.

The Plate represents a male and a female on a branch of the *Banksia serrata*, all of the natural size.



ANTHOCHÆRA LUNULATA, Gould.

Lunulated Wattle-Bird.

Anthochæra lunulata, Gould in Proc. of Zool. Soc., part v. p. 153 ; and in Syn. Birds of Australia, Part IV.

Djüng-gung, Aborigines of the lowland, and

Tur-dal-l, Aborigines of the mountain districts of Western Australia.

Little Wattle-Bird, Colonists of Swan River.

THIS species is very nearly allied to the *Anthochæra mellivora*, but differs from that bird in the greater length of its bill, in the entire absence of the stræ down the head and the back of the neck, and in the possession of a lunulate mark of white on either side of the neck. Its natural habitat is Western Australia, where it generally frequents the Banksias bordering rivers and lakes, and in fact all situations similar to those resorted to by its near ally : it is to be found in every part of the colony, but appears to be more abundant in the neighbourhood of Swan River and the lakes in its vicinity than elsewhere. In its habits it is very solitary and shy, and is moreover very pugnacious, attacking every bird, both large and small, that approaches its domicile.

Its flight is rapid and uneven, and its general note is a discordant cackling sound, resembling an attempt to sing, of the most disagreeable description.

A remarkable circumstance connected with the incubation of this bird is, that it appears to lay but a single egg, and it moreover appears to have no regular time of breeding, its nest being found in abundance from August to November. It is rather small in size, and is deposited in the fork of a perpendicular growing branch : the tree most generally chosen is that called by the colonists of Swan River the stink-wood, but it has been found in the parasitic clump of a Banksia, and also in a small scrubby bush two or three feet from the ground ; but it is more frequently constructed at a height of at least eight or twelve. It is formed of dried sticks, and lined with *Zamia* wool, soft grasses or flowers, and sometimes with sheep's wool. The egg is rather lengthened in form, being one inch and two lines long by nine and a half lines broad ; its ground colour is a full reddish buff, thinly spotted and marked with deep chestnut-brown and chestnut-red, some of the spots and markings appearing as if beneath the surface of the shell, and being most thickly disposed near the larger end.

The stomach, which is slightly muscular, is diminutive in size, and the food consists of honey and insects of various kinds, with which the young when hatched are also fed by the parent birds.

The female is considerably smaller than her mate, but does not differ in the colouring of her plumage.

Crown of the head, back of the neck, and upper part of the back olive-brown, the feathers being darkest in the middle ; lower part of the back and rump olive-brown, each feather having a line of white down the stem, dilated into a spot at the extremity ; upper tail-coverts olive-brown, with a crescent-shaped mark of white at the tip ; primaries brown, the inner webs for nearly their whole length deep chestnut ; secondaries and tertiaries brown margined with grey ; two middle tail-feathers greyish brown, very slightly tipped with white, the remainder dark brown largely tipped with white ; feathers of the sides of the neck long, narrow, pointed, and of a silvery grey ; throat and forepart of the neck greyish brown, with a round silvery grey spot at the extremity of each feather ; feathers of the chest and under surface greyish brown, with a fine line of white down the centre, dilated into an oblong spot at the extremity, the white predominating on the hinder part of the abdomen and under tail-coverts ; on each side of the chest an oblique mark of pure white ; irides bright hazel ; bill blackish brown ; feet and legs yellowish grey, the former the darkest and with a tinge of olive.

The figures are of the natural size.



TROPIDORHYNCHUS CORNICULATUS, *Vig. and Horsf.*

Friar Bird.

Merops corniculatus, Lath. Ind. Orn., vol. i. p. 276.

Corbi calao, Le Vaill. Ois. d'Am. et des Indes, tom. i. p. 69, pl. 24.

Knob-fronted Honey-eater, Lath. Gen. Hist., vol. iv. p. 161.

Knob-fronted Bee-eater, Ib. Gen. Syn. Supp., vol. ii. p. 151.—Shaw, Gen. Zool., vol. viii. p. 183.

Tropidorhynchus corniculatus, Vig. and Horsf. in Linn. Trans., vol. xv. p. 324.—Jard. and Selb. Ill. Orn., vol. iii. pl. 133.—Gould, Syn. Birds of Australia, Part I.

Merops monachus, Lath. Ind. Orn. Supp., p. xxxiv., young.

Coneled Bee-eater, Ib. Gen. Syn. Supp., vol. ii. p. 155.—Shaw, Gen. Zool., vol. viii. p. 166, young.

Coneled Honey-eater, Lath. Gen. Hist., vol. iv. p. 162, young.

Knob-fronted Bee-eater, White's Voy., pl. in p. 190, young.

Tropidorhynchus monachus, Vig. and Horsf. in Linn. Trans., vol. xv. p. 324, young.

Coldong, Aborigines of New South Wales.

Friar, *Poor Soldier*, &c., of the Colonists.

THERE are few birds more familiarly known in the colony of New South Wales than this remarkable species of Honey-eater: it is generally dispersed over the face of the country, both in the thick brushes near the coast and in the more open forests of the interior. I also observed it tolerably abundant on the banks of the Peel, but could not fail to observe that its numbers diminished as I descended the Namoi, on the lower parts of which river it is, I believe, rarely if ever seen, its place there being supplied by the yellow-throated species, *Tropidorhynchus citreogularis*. My own observations induce me to consider it as a summer visitant only to New South Wales; but as a lengthened residence in the country would be necessary to determine this point, my limited stay may have led me into error. It has never yet been known to visit Van Diemen's Land, neither have I traced it so far to the westward as South Australia.

The Friar Bird, selecting the topmost dead branch of the most lofty trees whereon to perch and pour forth its garrulous and singular notes, attracts attention more by its loud and extraordinary call than by its appearance. From the fancied resemblance of its notes to those words, it has obtained from the Colonists the various names of "Poor Soldier," "Pimlico," "Four o'clock," etc. Its bare head and neck have also suggested the names of "Friar Bird," "Monk," "Leather Head," etc.

Its flight is undulating and powerful, and it may frequently be seen passing over the tops of the trees from one part of the forest to another. While among the branches it displays a more than ordinary number of singular positions; its curved and powerful claws enabling it to cling in every variety of attitude, frequently hanging by one foot with its head downwards, etc. If seized when only wounded, it inflicts with its sharp claws severe and deep wounds on the hands of its captor.

Its food consists of the pollen of the *Eucalypti*, and insects, to which are added wild figs and berries.

It commences breeding in November, when it becomes animated and fierce, losing all fear of man, and readily attacking hawks, crows, magpies (*Gymnorhina*) or other large birds that may venture within the precincts of its nest, never desisting from the attack until they are driven to a considerable distance. The nest, which is rather rudely constructed, and of a large size for a Honey-eater, is cup-shaped, and outwardly composed of the inner rind of the stringy bark and wool, to which succeeds a layer of fine twigs lined with grasses and fibrous roots, the whole being suspended to the horizontal branch of an apple-tree (*Angophora*) or gum-tree without the least regard to secrecy, frequently within a few feet of the ground. So numerous were they breeding in the Apple-tree Flats near Aberdeen and Yarrundi, that they might almost be termed gregarious. The eggs are generally three in number, of a pale salmon colour with minute spots of a darker tint, one inch and five lines long by eleven lines broad.

There is no observable difference in the plumage of the sexes, but the female is somewhat smaller in size.

The adults have the bill and head dull ink-black; all the upper surface, wings and tail greyish brown, the feathers of the latter tipped with white; chin and lanceolate feathers on the chest silvery white, with a fine line of brown down the centre; remainder of the under surface brownish grey; eye red, fading immediately after death to brown and sometimes to greyish hazel; feet lead-colour.

The young, although having the same general colouring as the adult, have the head less denuded of feathers, and a mere rudiment of the knob on the bill; the feathers on the breast are also less lanceolate in form, and those on the sides of the chest are margined with yellow; eye dark brown, surrounded with short brown feathers lengthening into a tuft at the back of the head; feet much more blue than in adults.

The Plate represents an old bird and a young one of the first autumn, on the wild fig of the Upper Hunter; the birds and plant being of the natural size.



TROPIDORHYNCHUS ARGENTICEPS, *Gould.*

Silvery-crowned Friar-bird.

Tropidorhynchus argenticeps, Gould in Proc. of Zool. Soc., Part VII. 1839, p. 144.

FOR the first knowledge of this new species of *Tropidorhynchus*, science is indebted to Benjamin Bynoe, Esq., Surgeon of Her Majesty's Surveying ship the Beagle, who, on my visiting Sydney, placed his specimens at my disposal; since my return, other examples have been sent for my use, in this work, by His Excellency Captain Grey, now Governor of South Australia.

Mr. Bynoe's specimens were all obtained during the survey of the north-west coast, a portion of Australia the natural productions of which are but little known, and Captain Grey's during his expedition into the interior, from the same coast.

In size the Silvery-crowned Friar-bird is somewhat inferior to the common species (*Tropidorhynchus corniculatus*), from which it may also be readily distinguished by the crown of the head being clothed with well-defined, small, lanceolate feathers. Of its habits and economy nothing is known; but as it is very nearly allied to the last-mentioned species, we may reasonably conclude that they are very similar.

Crown of the head silvery grey; the remainder of the head naked, and of a blackish brown; throat and all the under surface white; back, wings and tail brown; bill and feet blackish brown.

The figure is of the natural size.



TROPIDORHYNCHUS CITREOGULARIS, *Gould.*

Yellow-throated Friar-Bird.

Tropidorhynchus citreogularis, Gould in Proc. of Zool. Soc., Part IV. p. 143 ; and in Syn. Birds of Australia, Part I.

Aŕ-dulk and *Wul-loo-rat*? Aborigines of Port Essington.

Leather-neck of the Colonists of Port Essington.

Yellow-throated Friar, Colonists of New South Wales.

THIS is strictly a bird of the interior of the south-eastern portion of Australia, and is never, so far as I am aware, found on the sea-side of the mountain ranges. I observed it in tolerable abundance during my tour to the Namoi ; first meeting with it in the neighbourhood of Brezi, whence as I descended the river to the northward it gradually became more numerous. I killed both adult and young birds in December, the latter of which had just left the nest, consequently the breeding-season must have been about a month previous. The yellow colouring of the throat represented in my 'Synopsis of the Birds of Australia,' is peculiar to the period of immaturity ; in the adult this colouring is entirely wanting, and the bird is one of the plainest-coloured species of the Australian Fauna.

Its habits and manners are very similar to those of the *Tropidorhynchus corniculatus* ; like that bird it feeds on insects, berries, fruits, and the flowers of the *Eucalypti*, among the smaller branches of which it may constantly be seen hanging and clinging in every possible variety of attitude.

In the neighbourhood of Port Essington on the north coast, a species of this form is found which precisely resembles the present bird in every respect, except that it is about one-fifth smaller and has a rather larger bill ; if these birds should ultimately prove to be merely varieties of each other, then the range of the species will be very extensive indeed ; in my own opinion they are distinct, but whether I am right in thus believing or not, can only be ascertained by an increased knowledge of the productions of this vast continent.

Mr. Gilbert states that the Port Essington bird is less abundant, less active, and has not so deep a voice as the *T. argenteiceps*, but that the habits and manners of the two birds are precisely similar.

The adult has the whole of the upper surface, wings and tail light brown ; all the under surface pale greyish brown ; bill and legs leaden olive ; irides and eyelash nearly black ; naked part of the face mealy bluish lead-colour.

The young are similar to the adult, but have the feathers of the upper surface fringed with grey, and those of the wings slightly margined with greenish yellow ; the throat and sides of the chest lemon-yellow ; face blackish, and not so mealy as in the adult.

The young of the Port Essington bird has the yellow colouring of the throat still more extensive than in the bird from New South Wales.

The figures represent an adult and a young bird from specimens killed on the Namoi.



ACANTHORHYNCHUS TENUIROSTRIS.

Slender-billed Spine-bill.

Certhia tenuirostris, Lath. Ind. Orn. Suppl., p. xxxvi.

Le Cap noir, Vieill. Ois. Dor., tom. ii. p. 94. pl. 60.

Slender-billed Honey-eater, Lath. Gen. Hist., vol. iv. p. 194. pl. lxii.

Flapping Honey-eater, Lath. Gen. Hist., vol. iv. p. 195.

Hooded Creeper, Shaw, Gen. Zool., vol. viii. p. 109.

Slender-billed Creeper, Lath. Gen. Syn. Suppl., vol. ii. p. 165. pl. 129.

Meliphaga tenuirostris, Vig. and Horsf. in Linn. Trans., vol. xv. p. 317.

Acanthorhynchus tenuirostris, Gould, Syn. Birds of Australia, Part II.

————— *dubius*? Gould in Proc. of Zool. Soc., Part V. p. 25; and in Syn. Birds of Australia, Part II.

Cobbler's Awt, Colonists of Van Diemen's Land.

Spine-bill, Colonists of New South Wales.

On referring to the above list of synonyms, it will be seen that I formerly entertained an opinion that there were two species of this genus very nearly allied to each other, the one a native of Van Diemen's Land, and the other of the continent of Australia; the former being distinguished from the latter by its smaller size in all its admeasurements, by the crescent-shaped markings of the neck, and by the brown of the abdomen being much deeper in colour; I am now, however, inclined to believe that they are identical; but as no conclusive evidence that such is the case has yet been obtained, I must leave the matter still doubtful until further research shall enable us to decide the question. In habits, disposition and nidification the two birds closely assimilate, as I had abundant opportunities of observing during my residence in the colonies.

There is no member of the large family of Honey-eaters to which it belongs that enjoys a structure more especially adapted for the purposes of its existence than the present species, whose fine and extremely delicate bill is peculiarly suited for the extraction of insects and honey from the inmost recesses of the tubular flowers which abound in many parts of Australia, particularly of the various species of *Epacris*, a tribe of plants closely allied to the Heaths (*Erica*) of Africa and Europe, which when in bloom are always frequented by numbers of these birds, so much so indeed that it would seem as if the one was expressly designed for the other, the flowers for the birds and *vice versa*; those who have traversed the immense beds of *Epacris impressa*, so abundant in Van Diemen's Land, must have often observed the bird darting out from beneath his feet and flitting off to a very short distance, descending again to the thickest parts of the beds. It also frequents the wattles and gums during their flowering-season, and appears to be attracted to their blossoms quite as much for the insects as for the nectar, the stomachs of all those dissected containing the remains of coleoptera and other insects. It is rather shy in disposition except when closely engaged in procuring food, when it may be approached within a yard or two.

Its flight is extremely quick and darting and performed with a zigzag motion; and its note, which is a monotonous shriek, is somewhat loud for so small a bird. Should the bird to which I have given the name of *dubius* prove to be merely a local variety, this species will be found to range over a wide extent of country, including Van Diemen's Land, all the islands in Bass's Straits, and the continent of Australia from South Australia to Moreton Bay; to the eastward of the former, or to the eastward and northward of the latter country, I have never been able to trace it.

The nest of this species is a small cup-shaped and rather beautiful structure, although not so compact or neatly formed as that of many other birds; those I found, both in Van Diemen's Land and New South Wales, were built on some low shrubs a few feet from the ground, mostly in a species of *Leptospermum*; it is outwardly constructed of moss and grasses, and lined with feathers; the eggs are two in number, of a delicate buffy white, increasing in depth of colour towards the larger end; in some instances I have found them marked with a zone of reddish chestnut spots shaded with indistinct markings of grey, intermingled with very minute ink-like dots; in form the eggs are much lengthened and pointed; their medium length is nine lines and breadth six lines.

Crown of the head shining greenish black; space between the bill and the eye, ear-coverts, lunated band on the sides of the chest, primaries, and six middle tail-feathers black; the remainder of the tail-feathers black largely tipped with white, and slightly margined on the external web with brown; back of the neck black largely tipped with white, and slightly margined on the external web with brown; secondaries, greater wing-coverts, rufous chestnut, passing into chestnut-brown on the upper part of the back; secondaries, greater wing-coverts, rump and upper tail-coverts grey; throat, cheeks and chest white, the first with a patch of chestnut-brown in the centre, deepening into black on its lower edge; abdomen, flanks and under tail-coverts light chestnut-brown; irides scarlet; bill black; feet reddish brown.

Specimens from Van Diemen's Land have the patch in the centre of the throat and the lunated marks on the sides of the neck much deeper and the whole of the under surface richer chestnut.

The figures are those of a male and female, on a branch of what is considered a white variety of *Epacris impressa*.



ACANTHORHYNCHUS SUPERCILIOSUS, *Gould.*

White-eyebrowed Spine-bill.

Acanthorhynchus superciliosus, Gould in Proc. of Zool. Soc., Part V. p. 24.

Bool-jeet, Aborigines of the lowland districts of Western Australia.

HITHERTO I have only received this fine and well-marked species of Spine-billed Honey-eater from Western Australia, but hereafter it will doubtless be found to range over a much greater extent of country; although a very local bird, it is tolerably abundant both at Swan River and King George's Sound, and is found to give a decided preference to the forests of Banksias, upon the blossoms of which trees it almost solely subsists. Its food, like that of the other members of its family, consists of insects and honey, for obtaining which its delicately organized bill and the filamentous form of its tongue are peculiarly adapted; the latter member being capable of considerable protrusion beyond the apex of the bill, thus enabling the bird to dive into the deepest interstices of the flowers, which its bill alone would not permit. Like its congeners, this species occasionally frequents the low shrub-like trees, and sometimes is even to be observed upon the ground in search of food. In its actions it displays great activity, darting about from branch to branch with a rapid zigzag motion; its flight is irregular and uneven, but it often rises perpendicularly in the air, uttering at the same time a rather pretty song; at others it emits a loud and strong note.

The nest, which is constructed among the large-leaved Banksias, is of a round compact form, and is composed of dried fine grasses, tendrils of flowers, narrow threads of bark and fine wiry fibrous roots matted together with zamia wool, forming a thick body, which is warmly lined with feathers and zamia wool mingled together; the external diameter of the nest is three inches, and that of the cavity about one inch and a quarter. The eggs are two in number, nine lines long by six and a half broad; their ground colour in some instances is a delicate buff, in others a very delicate bluish white with a few specks of reddish brown distributed over the surface, these specks being most numerous at the larger end, where they frequently assume the form of a zone. The breeding-season is in October.

The sexes present little or no difference in external appearance, but the female may generally be distinguished from her mate by her more diminutive size and the more slender contour of her body.

Crown of the head, all the upper surface, wings, and six middle tail-feathers greyish brown, the remainder of the tail-feathers black, largely tipped with white and narrowly margined on their external edges with brown; space between the bill and eye, and the ear-coverts blackish brown; stripe over the eye, chin, and a broader stripe beneath the eye white; back part of the neck light chestnut-brown; centre of the throat rich chestnut, bounded below by a crescent of white, which is succeeded by another of black; abdomen and under tail-coverts light greyish brown, in some specimens deepening into buff; irides reddish brown; bill black; legs dark brown.

The figures are those of a male and a female of the natural size.



MYZOMELA SANGUINOLENTA.

Sanguineous Honey-eater.

- Certhia sanguinolenta*, Lath. Ind. Orn. Supp., p. xxxvii.
L'Heorotaire sanguin, Vieill. Ois. Dor., tom. ii. p. 127.
Sanguineous Creeper, Lath. Gen. Syn. Supp., vol. ii. p. 167. pl. 130.—Shaw, Gen. Zool., vol. viii. p. 235.
Sanguineous Honey-eater, Lath. Gen. Hist., vol. iv. p. 201. pl. 73.
Certhia dibapha, Lath. Ind. Orn. Supp., p. xxxvii.
L'Heorotaire rouge tacheté, Vieill. Ois. Dor., tom. ii. p. 127.
Small-crested Creeper, Shaw, Gen. Zool., vol. viii. p. 253. pl. 35?
Cochineal Creeper, Lath. Gen. Syn. Supp., vol. ii. p. 167.
Cochineal Honey-eater, Lath. Gen. Hist., vol. iv. p. 201.
Certhia erythropygia, Lath. Ind. Orn. Supp., p. 38.
Red-rumped Creeper, Lath. Gen. Syn. Supp., vol. ii. p. 169.—Shaw, Gen. Zool., vol. viii. p. 249.
Le Kuyameta, Vieill. Ois. Dor., tom. ii. p. 92. pl. 58.
Certhia Australasiæ, Leach, Zool. Misc., vol. i. pl. 11.
Meliphaga Cardinalis, Vig. and Horsf. in Linn. Trans., vol. xv. p. 316.
Blood-bird of the Colonists of New South Wales.
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THIS beautiful little bird is an inhabitant of the thick brushes of New South Wales, particularly those near the coast and those clothing the hilly portions of the interior, and I have reason to believe that it is rarely, if ever, found among the trees of the open parts of the country. I have not yet seen specimens from the western, and only a single example from the northern coasts, whence I infer that the south-eastern part of the continent is its natural and restricted habitat. It gives a decided preference to those parts of the forest that abound with flowering plants, whose fragrant blossoms attract large numbers of insects of various kinds, upon which and the pollen of the flower-cups it chiefly subsists.

I regret to say that I was unable to obtain any information respecting the nidification of this pretty species; but in this respect it doubtless closely resembles the other members of the group.

The sexes are very dissimilar in colour, the female being of a uniform pale brown above and lighter beneath, while the male is dressed in a gorgeous livery of scarlet and black; the young, as is usually the case where the sexes differ considerably in colour, resembles the female until after the first moult, when it gradually assumes the colouring of the male.

Much confusion exists in the writings of the older authors respecting this bird, which has arisen from the circumstance of their having considered it to be identical with two other species, one inhabiting the Isle of Tanna, and the other the province of Bengal: after a careful examination of the subject, I am of opinion that the synonyms given above are all that have reference to the Australian bird.

The male has the head, neck, breast, back and upper tail-coverts rich shining scarlet; lores, wings and tail black, the wing-coverts margined with buffy white, and the primaries with greyish olive; under surface of the wing white; abdomen and under tail-coverts buff; bill and feet black; irides dark brown.

The female is uniform light brown above, becoming much lighter beneath.

The figures are those of the two sexes and of the natural size.



MYZOMELA ERYTHROCEPHALA, *Gould.*

Red-headed Honey-eater.

Myzomela erythrocephala, Gould in Proc. of Zool. Soc., Part VII. p. 144.

THE Red-headed Honey-eater is so distinctly marked as almost to preclude the possibility of its being confounded with any known species of the genus. In size it rather exceeds the common Sanguineous Honey-eater, but is far more diminutive than the species described by Latham as inhabiting the Isle of Tanna, under the name of *Certhia Cardinalis*.

The northern portion of Australia would appear to be the true habitat of the bird here represented, all the specimens that have come under my notice having been procured at Port Essington, where it is exclusively confined to the extensive beds of mangroves bordering the inlets of the sea. From the flowers of these trees it collects its favourite food, which, like that of the other species of the group, consists of insects and honey. It is a most active little creature, flitting from one cluster of flowers to another, and from branch to branch with the greatest rapidity, uttering at the same time its rather sharp and harsh chirrup. Mr. Gilbert states that it is far from being abundant, and is so seldom seen near the settlement that no examples had been procured prior to his visit.

The sexes present the usual difference in the smaller size and sombre colouring of the female.

No information whatever was acquired respecting its nidification, nor whether it be migratory or not.

The male has the head and rump scarlet, the remainder of the plumage deep chocolate-brown; irides reddish brown; bill olive-brown, becoming much lighter on the lower mandible; legs and feet olive-grey.

The female is uniform brown above, lighter beneath.

The Plate represents two males and a female of the natural size.



MYZOMELA PECTORALIS, *Gould.*

Banded Honey-eater.

Myzomela pectoralis, Gould in Proc. of Zool. Soc., Part VIII. p. 170.

It will be seen from the number of novelties received from that territory, that the northern coast of Australia possesses a fauna almost peculiar to itself, few species, of the smaller birds at least, being similar to those of the southern coast.

The present interesting bird was forwarded to me by Mr. Bynoe as having been shot by him on the north coast, but I regret to say it was unaccompanied by any information whatever respecting its habits. In its structure it offers so close an alliance to the typical *Myzomelæ* that I have provisionally placed it in that group.

Some of the specimens sent me had the centre of the back of a ferruginous hue, while in others the same part was jet black; I am inclined to regard the former to be the plumage of the young birds of the year, and it is just possible it may also be characteristic of the adult female.

Forehead, crown of the head, upper surface, wings, tail and a narrow band across the chest black; throat, upper tail-coverts and all the under surface white; bill and feet black.

The birds are all figured of the natural size on one of the interesting plants from the same locality.

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MYZOMELA NIGRA, *Gould.*

Black Honey-eater.

Myzomela nigra, Gould in Birds of Australia, Part II. cancelled.

Dwer-da-ngok-ngun-nin, Aborigines of the mountain districts of Western Australia.

THIS most active little bird is peculiar to the interior of Australia, over which it has an extensive range. Mr. Gilbert found it in Western Australia, and I myself met with it on the plains near the Namoi; with me it was always on the Myalls (*Acacia pendula*), while in Western Australia, where it is very local, it generally evinced a preference for the sapling gums. Although it has the feathered tongue and sometimes partakes of the sweets of the flowers, it feeds almost exclusively on insects, which it procures both on the blossoms and among the thickly-foliaged branches. The male possesses a feeble plaintive note, which he frequently pours forth while perched upon some elevated dead branch, where he sits with his neck stretching out and without any apparent motion, except the swelling out of the throat and the movement of the bill. Its flight is remarkably quick, and performed with sudden zigzag starts.

The female differs remarkably from the male in the colouring of the plumage, and, as is the case with many other birds, is much more difficult of access than her mate, who is always more animated, and frequently betrays his presence by his voice or song.

Mr. Gilbert was more fortunate than myself in finding the nest of this little bird, and has furnished the following notes respecting its incubation:—

“This species constructs a neat cup-shaped nest, formed of dried grasses. I found two, both of which were built in the most conspicuous situations; one in a fork at the top of a small scrubby bush, unsheltered by even a bough or a leaf; the other was on the dead branch of a fallen tree, in a similar exposed situation, and quite unprotected from wet or heat. It breeds during the months of October and November, and lays two eggs,” which are of a light brownish buff, encircled at the centre with a band of brown, produced by numerous small blotches of that colour, which appear as if beneath the surface of the shell; they are seven lines long by five and a half lines broad.

The male has the head, throat, stripe down the centre of the abdomen, all the upper surface, wings and tail sooty black; the remainder of the plumage pure white; irides blackish brown; bill and feet black.

The female differs in having the head, all the upper surface, wings and tail brown; throat and all the under surface brownish white, the centre of each feather being the darkest; bill brown; legs brownish black.

The Plate represents the two sexes of the natural size.



MYZOMELA OBSCURA, *Gould.*

Obscure Honey-eater.

Myzomela obscura, Gould in Proc. of Zool. Soc., Part X. p. 136.

THIS species is a native of the northern parts of Australia. At Port Essington, where my specimens were procured, it is only to be met with in quiet, secluded and thickly-wooded districts adjacent to small streams of water; its favourite tree appears to be the *Grevillia*, from the blossoms of which it obtains great quantities of honey and insects. The shy and retiring disposition of this species renders the acquisition of specimens very difficult: "at no time during my stay," remarks Mr. Gilbert, "did I succeed in getting sight of more than a solitary individual, and I believe it to be a rare bird in all parts of the Cobourg Peninsula."

This bird differs so much in colour from all the other species yet discovered, that it is readily distinguished from all of them.

The sexes present no external marks of distinction, except that the female is somewhat smaller than her mate.

The whole of the plumage is dull brown, with a vinous tinge on the head; under surface paler than the upper; irides bright red; bill dark greenish black; feet dark bluish grey; tarsi tinged with yellow.

The figures are of the natural size.



ENTOMYZA CYANOTIS, Swains.

Blue-faced Entomyza.

- Gracula cyanotis*, Lath. Ind. Orn. Supp., p. xxix.—Shaw, Gen. Zool., vol. vii. p. 474.
Blue-cheeked Honey-sucker, *Meliphaga cyanops*, Lewin, Birds of New Holl., pl. 4.
Graculine Honey-eater, Lath. Gen. Hist., vol. iv. p. 166.
Blue-eared Grackle, Lath. Gen. Syn. Supp., vol. ii. p. 130.
Turdus cyaneus, Lath. Ind. Orn. Supp., p. xlii.
Blue-cheeked Thrush, Ib. Gen. Syn. Supp., vol. ii. p. 184.—Gen. Hist., vol. v. p. 124.
Tropidorhynchus cyanotis, Vig. and Horsf. in Linn. Trans., vol. xv. p. 325.
Entomyza cyanotis, Swains. Class. of Birds, vol. ii. p. 328.—G. R. Gray, List of Gen. of Birds, p. 16.
L'Heoro-twire graculé, Vieill. Ois. Dor., tom. ii. p. 125, pl. 87, young.
Graculine Creeper, Shaw, Gen. Zool., vol. viii. p. 242, young.
Graculine Honey-eater, var. A., Lath. Gen. Hist., vol. iv. p. 166, young.
Pale-cheeked Honey-eater, Ib., p. 167, young.
Merops cyanops, Lath. Ind. Orn. Supp., p. xxxiv., young.
Blue-cheeked Bee-eater, Ib. Gen. Syn. Supp., vol. ii. p. 154, young.—Shaw, Gen. Zool., vol. viii. p. 171, young.
Blue-cheeked Honey-eater, Lath. Gen. Hist., vol. iv. p. 167, young.
—, var. A. and B., Ib., p. 168, young.
White-crowned Honey-eater, Ib., p. 169, young.
Batikin, Aborigines of the coast of New South Wales.
Blue-eye of the Colonists.
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THIS attractive and beautiful Honey-eater, one of the finest of the *Meliphagidæ*, is strictly indigenous to New South Wales, where it is abundant and very generally dispersed: I observed it in nearly every part of the colony I visited, both in winter and summer. I also shot a single specimen on the Namoi, but as this was almost the only one I saw beyond the mountain ranges, I believe its most natural habitat to be between the great dividing chain of mountains and the sea. In all probability it may be found far to the northward on the eastern coast, but it has not yet been observed in South Australia, neither is it an inhabitant of Van Diemen's Land.

In habits and actions the Blue-faced Honey-eater bears a striking resemblance to the members of the genera *Ptilotis* and *Hæmatops*; like them, it is found almost exclusively on the *Eucalypti*, searching among the blossoms and smaller leafy branches for its food, which is of a mixed character, consisting partly of insects and partly of honey, and probably, judging from others of its family, berries and fruits, but this latter supposition I was not able to verify. Mr. Caley states, that he once saw "several of them frequenting a tree, where they were very busy in obtaining something that appeared to have exuded from a wounded part. I do not know what the substance could be, otherwise than a kind of gum of a bitter and astringent taste." As I have never detected them in feeding on this or any similar substance, I should rather suppose they were in search of the insects that might have been attracted by this exudation.

I have frequently seen eight or ten of these bold and spirited birds, with numerous other small Honey-eaters and Parrakeets, on a single tree, displaying the most elegant and easy movements, clinging and hanging in every variety of position, frequently at the extreme ends of the small, thickly-flowered branches, bending them down with their weight; they may, however, be easily distinguished from the other birds with which they are in company by their superior size, the brilliancy of their blue face, and the contrasted colours of their plumage; they are rendered equally conspicuous by the pugnacity with which they chase and drive about the other species resorting to the same tree.

It frequently utters a rather loud and monotonous cry, not worthy the name of a song.

I observed a most curious fact respecting the nidification of this bird: in every instance that I found its eggs, they were deposited on the deserted, dome-shaped, large nest of the *Pomatorhinus*, so numerous in the Apple-tree Flats in the district of the Upper Hunter; never within the dome, but in a neat round depression on the top. I had many opportunities of driving the female off the nest, and I can therefore speak with confidence as to this fact. Whether this bird resorts only to places where it may avail itself of the nest of the *Pomatorhinus*, or whether, under other circumstances, it constructs a nest for itself, are points to which I would call the attention of those who are favourably situated for investigating them; and who, by so doing, would render the history of this species so much the more complete. It is



ENTOMYZA ALBIPENNIS, *Gould.*

White-pinioned Honey-eater.

Entomyza albipennis, Gould in Proc. of Zool. Soc., Part VIII, p. 169.

Wut-ra-luh, Aborigines of Port Essington.

THE *Entomyza albipennis* exhibits so many specific differences from the *E. cyanotis*, that it is almost impossible for one to be mistaken for the other: in the first place it is somewhat smaller in size, and in the next the tints of the plumage are more strongly contrasted; besides which, the white at the basal portion of the pinions is a character which will at all times distinguish it from its near ally. So far as is yet known, its habitat is confined to the northern coast of Australia, where it is said to be rather abundant, particularly in the neighbourhood of the settlement at Port Essington on the Cobourg Peninsula. Mr. Gilbert states that it "is very shy, and from its being always on the alert, somewhat difficult to get near; it is one of the first birds heard in the morning, and often utters its plaintive *peet* half-an-hour before daylight; as soon as the sun is fairly above the horizon, its note is immediately changed to a harsh squeaking tone, which is frequently uttered while the bird is on the wing, and repeated at intervals throughout the day; it often takes tolerably long flights, mounting in the air to a considerable height above the trees, and then progressing steadily and horizontally. It is mostly met with in small families of from six to ten in number, inhabiting the topmost branches of the loftiest trees, and is seldom seen on or near the ground."

The food consists of insects and the pollen of flowers, which are procured from the almost perpetually flowering *Eucalypti*.

The sexes present little or no difference in the colouring of the plumage, or, when fully adult, in the colouring of the soft parts, such as the naked skin round the eyes, &c.; immature birds, on the contrary, vary very much in the colouring of the face and bill; in the youthful those parts are saffron-yellow, which changes to rich ultramarine blue in the adult.

The adults have the crown of the head and back of the neck black; lower part of the face, chin and centre of the chest slaty black; a crescent-shaped mark at the occiput, a line from the lower mandible passing down each side of the neck, and all the under surface pure white; upper surface and wings greenish golden olive; primaries brown, the basal half of their inner webs snow-white; tail-feathers brown, tinged with golden olive, all but the two centre ones tipped with white; point and cutting edges of the upper mandible blackish grey; basal half of the culmen horn-colour; remainder of the bill sulphur-yellow; orbits brilliant blue; legs and feet leek-green.

The Plate represents an adult and an immature bird of the natural size.



MELITHREPTUS VALIDIROSTRIS, *Gould.*

Strong-billed Honey-eater.

Hæmatops validirostris, Gould in Proc. of Zool. Soc., Part IV. p. 144; and in Syn. Birds of Australia, Part I.
Eidopsaris bicinctus, Swains. An. in Menag., p. 344. No. 188.—Ib. Class. of Birds, vol. ii. p. 327.
Cherry-picker, Colonists of Van Diemen's Land.

THIS bird, the largest species of the genus yet discovered, is a native of Van Diemen's Land, and so universally is it distributed over that island, that scarcely any part is without its presence. The crowns of the highest mountains as well as the lowlands, if clothed with *Eucalypti*, are equally enlivened by it. Like all the other members of the genus, it frequents the small leafy and flowering branches; it differs, however, from its congeners in one remarkable character, that of alighting upon and clinging to the surface of the boles of the trees in search of insects, after the manner of the Woodpecker and Nuthatch,—not that it can traverse this part of the tree with the same facility; I never in fact saw it run up and down the trunk as those birds do, but merely fly to such parts as instinct led it to select as the probable abode of insects; and it always perches across the stem,—a position seldom, if ever, assumed by the Nuthatch or Woodpecker; I do not, however, consider this habit of sufficient importance to warrant its separation from those with which it is here associated.

The chief food of this species is insects of various kinds, after which it searches with the most scrutinizing care among the flowering gums.

I am indebted to my friend the Rev. Thomas J. Ewing of Hobart Town, Van Diemen's Land, for the nest and eggs of this bird, which I failed in procuring during my stay in that island. Like those of the other members of the genus the nest is round and cup-shaped, suspended by the rim and formed of coarse wiry grasses, with a few blossoms of grasses for a lining; the eggs are three in number, eleven lines long by eight lines broad, and of a dull olive-buff, thickly spotted and blotched with markings of purplish brown and bluish grey, the latter appearing as if beneath the surface of the shell.

The sexes assimilate so closely in size and plumage, that by dissection alone can they be distinguished; the young, on the contrary, during the first autumn differ so considerably from the adult, as almost to induce the belief that they are the young of some other species; having, however, killed them myself at the breeding-place in company with the adults, I can vouch that they are really the young of this bird and of none other. The specimens from which the upper figures in the accompanying Plate were taken, were shot by myself near the summit of Mount Wellington. I may mention that in the vast forests of gums on the banks of the Tamar, this species was equally or even more abundant than in the southern part of the island. I have never seen it on the continent of Australia, neither have specimens been sent from New South Wales or South Australia.

Its song consists of a couple of notes and is not remarkable for its melody.

Crown of the head jet-black, with an occipital band of white terminating at each eye; ear-coverts, chin and back of the neck black; all the upper surface greyish olive, becoming brighter on the rump and external edges of the tail-feathers; wings brown, with a slight tinge of olive; throat pure white; under surface brownish grey; bill black; feet brownish horn-colour; eyes reddish brown; bare skin over the eye white, tinged with bright green.

The young have the bill and feet yellow, but the latter paler than the former, and a circle of the same colour round the eye; the band at the occiput is also pale yellow instead of white.

The Plate represents an adult male and two young birds in the plumage of the first autumn, of the natural size.



MELITHREPTUS GULARIS, *Gould.*

Black-throated Honey-eater.

Hæmatops gularis, Gould in Proc. of Zool. Soc., Part IV. p. 144 ; and in Syn. Birds of Australia, Part I.

THIS species is very abundant in all parts of South Australia, where it inhabits the large *Eucalypti*. During my stay in Adelaide I frequently saw it on some of the high trees that had been allowed to remain by the sides of the streets in the middle of the city. From this locality it extends its range eastward to New South Wales, where it is much more rare, and where it can only be sought for with the certainty of finding it along the extreme limits of the colony towards the interior. I killed several specimens in the Upper Hunter district, and observed it to be tolerably numerous on the plains in the neighbourhood of the river Namoi, and that it breeds in all these countries is proved by my having killed the young in different stages of growth in all of them. In its habits and economy it differs considerably from the *Melithreptus validirostris*; for instance, I never saw it perch on the boles of the trees, as is usual with that species, neither is it so exclusively confined to the large trees. It is a very noisy bird, constantly uttering a loud harsh grating call while perched on the topmost dead or bare branch of a high tree; the call being as frequently uttered by the female as by the male. Like the *Melithreptus lunulatus*, it frequents the leafy branches, which it threads and creeps among with the greatest ease and dexterity, assuming in its progress a variety of graceful attitudes. Insects and the pollen of flowers being almost its sole food, those trees abounding with blossoms are visited by it in preference to others.

There is no variation in the colouring of the sexes, but there is a very considerable difference between the young and old birds, particularly in the colouring of the soft parts; the young are much less brilliant than the young of *M. validirostris*, in which the colouring of the soft parts far excels those of the adults.

With the nest and eggs of this species I am unacquainted; they are therefore desiderata to my cabinet, and would be thankfully received from any person resident in the colony where the bird is so common. That the nest will be cup-shaped in form, constructed of grasses, &c., and suspended by the rim to the smaller branches of the *Eucalypti*, and that the eggs will be two or three in number, there can be little doubt.

Crown of the head black, an occipital band of white terminating at each eye; ear-coverts and back of the neck black; back and rump golden olive; wings and tail brown; throat greyish white, with a central stripe of black; under surface greyish brown; bill black; feet and tarsi brownish orange; irides hazel; bare skin above the eye beautiful bluish green.

The young have the gape, lower mandible, and feet yellowish orange.

The Plate represents the two sexes of the natural size.



MELITHREPTUS LUNULATUS.

Lunulated Honey-eater.

Certhia lunulata, Shaw, Gen. Zool., vol. viii. p. 224.

Le Fuscabin, Vieill. Ois. dor., tom. ii. p. 95. pl. 61.

Red-eyed Honey-eater, Lath. Gen. Hist., vol. iv. p. 203. no. 65.

Meliphaga lunulata, Vig. & Horsf. in Linn. Trans., vol. xv. p. 315. —Jard. & Selb. Ill. Orn., vol. iii. pl. 134. fig. 2.

Black-crowned Honey-sucker, Lewin, Birds of New Holl., pl. 24.

Meliphaga atricapilla, Temm. Pl. Col. 335. fig. 1.

——— *torquata*, Swains. Zool. Ill., 1st Ser., pl. 116.

Hæmatops lunulatus, Gould in Syn. Birds of Australia, Part I.

Gymnophrys torquatus, Swains. Class. of Birds, vol. ii. p. 327.

Melithreptus lunulatus, G. R. Gray, List of Gen. of Birds, 2nd edit., p. 21.

THE Lunulated Honey-eater is very abundantly dispersed over the colonies of New South Wales and South Australia, where it inhabits almost every variety of situation, but gives a decided preference to the *Eucalypti* and *Angophoræ* trees, among the smaller branches of which it may be constantly seen actively engaged in searching for insects, which with the pollen of the flowers constitute its sole food. It is a stationary species, and breeds during the months of August and September; its beautiful, round, cup-shaped open nest is composed of the inner rind of the stringy bark or other allied gum-trees intermingled with wool and hair, warmly lined with opossums' fur, and is suspended by the rim to the small leafy twigs of the topmost branches of the *Eucalypti*. The eggs are two or three in number, of a pale buff, dotted all over, but particularly at the larger end, with distinct markings of rich reddish brown and chestnut-red, among which are a few clouded markings of bluish grey; their medium length is nine lines, and breadth six and a half lines.

Like the young of *M. chloropsis*, the young birds of this species breed some time before arriving at maturity; at all events I have found examples breeding with that brown colouring of the head and neck, which I believe to be characteristic of youth.

The sexes are alike in plumage, but the female is somewhat smaller than the male.

Upper surface greenish olive; head and chin black; crescent-shaped mark at the occiput and all the under surface white; wings and tail brown, the apical half of the external webs of the primaries narrowly edged with grey; basal half of the external webs of the primaries, the outer webs of the secondaries and the tail-feathers washed with greenish olive; naked space above the eye scarlet; feet olive; irides very dark brown; bill blackish brown.

The Plate represents a male and a female of the natural size.



MELITHREPTUS CHLOROPSIS, *Gould.*

Swan River Honey-eater.

Melithreptus chloropsis, Gould in Proc. of Zool. Soc., November, 1847.

Jin-gee, Aborigines of the lowland, and

Bun-gèen, of the mountain districts of Western Australia.

Be-ril-be-ril, Aborigines of Swan River.

THIS species differs from the *Melithreptus lunulatus* in being of a larger size, and in having the bare space above the eyes of a pale green instead of red; in other respects the two birds so closely assimilate, that they are scarcely distinguishable from each other. Individuals in a browner and more dull style of plumage, presenting in fact all the appearances of young birds of the first year, have occasionally been found breeding, a circumstance which has induced many persons to believe them to be distinct; as, however, I found in New South Wales individuals in a similar style of plumage in company and breeding with adult *Melithrepti lunulati*, I am induced to regard these dull-coloured birds as merely precocious examples of the respective species, affording additional evidence of the extreme fecundity of the Australian animals.

The *Melithreptus chloropsis* is a native of Western Australia, where Mr. Gilbert states it is almost always found on the upper branches of the different species of *Eucalypti*, feeding upon the honey of the flowers and insects. Its usual note is a rapidly uttered *twit*, but it occasionally emits a harsh, grating and lengthened cry.

Its flight is of short duration, merely extending from tree to tree in undulating starts.

The nest is usually suspended from the small branches near the top of the gum-trees, where the foliage is thickest, which renders it extremely difficult to detect. A nest found by Mr. Gilbert in October was formed of sheep's wool and small twigs; another found by him in November was attached to a small myrtle-like tree, in a thick gum forest, not more than three feet from the ground; both these nests contained three eggs, nine and a half lines long by six and a half lines broad, of a deep reddish buff, thinly spotted all over, but particularly at the larger end, with dark reddish brown, some of the spots being indistinct, while others were very conspicuous.

The stomach is somewhat muscular, but very diminutive in size, and the food consists of honey, the buds of flowers and small coleoptera.

Upper surface greenish olive; head and chin black; crescent-shaped mark at the occiput and under surface white; wings and tail brown, margined with greenish olive; apical half of the external webs of the primaries narrowly edged with white; irides dull red; bill blackish brown; naked space above the eye greenish white in some, in others pale wine-yellow; tarsi and outer part of the feet light greenish olive; inside of the feet bright yellow.

The Plate represents the two sexes of the natural size.



MELITHREPTUS ALBOGULARIS, *Gould.*

White-throated Honey-eater.

Melithreptus albugularis, Gould in Proc. of Zool. Soc., November 1847.

THIS species, which inhabits the northern and eastern parts of Australia, is very abundant on the Cobourg Peninsula, and I have received specimens from the neighbourhood of Moreton Bay. The total absence of any black mark beneath the lower mandible and the pure whiteness of the throat serve to distinguish it from every other known species; the colouring of the back, which inclines to rich wax-yellow, is also a character peculiar to it. It is very numerous around the settlement at Port Essington, where it occurs in families of from ten to fifteen in number; it is of a very pugnacious disposition, often fighting with other birds much larger than itself; while among the leafy branches of the *Eucalypti*, which are its favourite trees, it frequently pours forth a loud ringing whistling note, a correct idea of which is not easily conveyed. Like its near ally the sexes present no other external difference than the smaller size of the female; and the young at the same age present a similar style of colouring to that observable in the *M. lunulatus* and *M. chloropsis*, the head and sides of the neck being brown instead of black, and the naked skin above the eye scarcely perceptible.

The food consists entirely of insects and the pollen of flowers, in searching for which it displays a great variety of positions, sometimes threading the leaves on the smaller branches, and at others clinging to the very extremities of the bunches of flowers.

The nest, which is always suspended to a drooping branch, and which swings about with every breath of wind, is formed of dried narrow strips of the soft bark of the *Melaleuca*. The eggs, which are generally two in number, are of a light salmon-colour, blotched and freckled with reddish brown, and are about nine lines long by six lines broad.

Upper surface greenish wax-yellow; head black; crescent-shaped mark at the occiput, chin and all the under surface white; wings and tail brown margined with greenish wax-yellow; irides dull red; bill brownish black; legs and feet greenish grey, with a tinge of blue on the front of the tarsi.

The Plate represents the two sexes of the natural size.



MELITHREPTUS MELANOCEPHALUS, *Gould.*

Black-headed Honey-eater.

Melithreptus melanocephalus, Gould in Proc. of Zool. Soc., May 27, 1845.

THIS bird I believe to be peculiar to Van Diemen's Land, over the whole of which island it is very abundant. The *Eucalypti* appear to be the trees to which it gives preference, for although it is seen on every tree in the forest, the gums are those most frequented by it; and among the foliage and flowers of those trees it is constantly searching for its food, which is of a mixed character, and which, like that of the other members of the *Meliphagidæ*, consists principally of insects, particularly small coleoptera, and the pollen of flowers; like the other members of the family also, it creeps and clings about the branches after the manner of the Tits of Europe. It is a lively, animated bird, and generally goes in companies of from ten to twenty in number, according as the supply of food may be more or less plentiful. During the fruit-season it frequents the gardens of the settlers and commits considerable havoc among the fruit, of which it is exceedingly fond.

The sexes are precisely alike in external appearance, but the young differ considerably from the adults, having the throat yellowish white instead of black, and the basal portion of the bill flesh-colour or yellow; their feet also are much lighter than the adults.

This bird is one of the numerous foster-parents of *Cuculus cinereus* and *C. cineraceus*, which species I have seen it feeding soon after leaving the nest.

The whole of the head and throat, and a semilunar mark on either side of the chest deep glossy black; all the upper surface yellowish olive, becoming brighter on the rump; wings and tail brownish grey with lighter margins; breast white; remainder of the upper surface greyish white; bill black; irides reddish brown; feet brown; bare skin over the eye pearly white, slightly tinged with green.

The Plate represents a male and a female of the natural size.



MYZANTHA GARRULA, *Vig. and Horsf.*

Garrulous Honey-eater.

Merops garrulus, Lath. Ind. Orn., Supp. p. xxiv.

Chattering Bee-eater, Lath. Gen. Syn., Supp., vol. ii. p. 154.—Shaw, Gen. Zool., vol. viii. p. 171.

Chattering Honey-eater, Lath. Gen. Hist., vol. iv. p. 164.

Philemon garrulus, Vieill. 2nd edit. du Nouv. Dict. d'Hist. Nat., tom. xxvii. p. 427.—Ib. Ency. Méth. Orn., Part ii. p. 616.

Myzantha garrula, Vig. and Horsf. in Linn. Trans., vol. xv. p. 319.

Cobaijin, Aborigines of New South Wales.

Miner, Colonists of Van Diemen's Land.

VAN Diemen's Land, and all parts of the colonies of New South Wales and South Australia, are alike inhabited by this well-known bird. It has never yet been observed in northern or western Australia, its place being supplied in those parts of the country by other nearly allied species. On comparing examples from Van Diemen's Land with others killed on the continent of Australia, a difference is found to exist in their relative admeasurements, the Van Diemen's Land birds being more robust and larger in every respect; still as not the slightest difference is observable in the markings of their plumage, I consider them to be merely local varieties and not distinct species.

The natural habits of this bird lead it to frequent the thinly timbered forests of *Eucalypti* clothing the plains and low hills, rather than the dense brushes, and so local is it and so exclusively does it confine itself to such situations that the edge of a river frequently forms the boundary of its habitat: for instance, it is very abundant on the northern side of the Derwent near Hobart Town, yet never did I meet with it on the opposite shore during the whole of my stay in Van Diemen's Land excepting many miles up the river, where the trees and land on both sides appear equally suitable to its habits.

The Garrulous Honey-eater is not truly gregarious, but moves about in small flocks of from four to ten in number. In disposition it is unlike any other bird I ever met with, for if its haunts be in the least intruded upon it becomes the most restless and inquisitive creature possible, and withal so bold and noisy that it is regarded as a troublesome nuisance rather than an object of interest; no sooner does the hunter come within the precincts of its abode than the whole troop assemble round him and perform the most grotesque actions, spreading out their wings and tail, hanging from the branches in every possible variety of position, and sometimes suspended by one leg, keeping up all the time one incessant babbling note: were this only momentary or for a short time, their droll attitudes and singular note would be rather amusing than otherwise; but when they follow you through the entire forest, leaping and flying from branch to branch, and almost buffeting the dogs, they become very troublesome and annoying, awakening as they do the suspicions of the other animals of which you are in pursuit.

The food of this bird is of a mixed character, for although it loves to dwell among the branches of the flowering *Eucalypti*, from the pollen of the flowers of which it obtains much genial food, it preys with avidity upon insects, both those resorting to the flowers of the gum-trees and those—coleoptera, &c.—peculiar to the ground; it is consequently often to be seen descending in pursuit of insects, particularly under the large trees on the grassy open plains. The stomach is of the same diminutive size as the rest of the Honey-eaters, but, as might be supposed from the varied character of the food, is much more muscular.

The nest is cup-shaped and about the size of that of the European Thrush, very neatly built of fine twigs and coarse grass, and lined either with wool and hair, or fine soft hair-like strips of bark, frequently mixed with feathers: it is usually placed among the small upright branches of a moderately sized tree. The eggs, which are thirteen lines long by nine and a half lines broad, are of a bluish white, marked all over with reddish brown, without any indication of the zone at the larger end so frequently observable in the eggs of other species.

The sexes offer no other external difference than that the female is a trifle smaller than her mate.

Face grey; crown of the head dull black; ear-coverts and a crescent-shaped mark inclining upwards to the angle of the bill glossy black; all the upper surface light greyish brown; the feathers at the back of the neck tipped with silvery grey; primaries dark brown margined externally with grey; secondaries dark brown on their inner webs, the outer webs grey at the tip, and wax-yellow at the base; tail greyish brown, with dark brown shafts, and all but the two centre feathers largely tipped with brownish white; chin grey, a patch of dark brown down the centre; under surface grey; the feathers of the breast with a narrow crescent-shaped mark of brown near the tip of each; irides dark hazel; naked space beneath the eye, bill and feet yellow.

The Plate represents the two sexes of the natural size, drawn from specimens killed in Van Diemen's Land.



MYZANTHA OBSCURA, *Gould.*

Sombre Honey-eater.

Myzantha obscura, Gould in Proc. of Zool. Soc., Part VIII. p. 159.

Bil-yâ-goo-rong, Aborigines of the lowland, and

Bil-youi-ga, Aborigines of the mountain districts of Western Australia.

THIS species inhabits Swan River and the south-western portion of Australia generally, where it beautifully represents the *Myzantha garrula* of New South Wales. In habits, actions and disposition the two birds nearly assimilate, minor differences being easily discernible.

Mr. Gilbert's notes supply me with the following information, which I give in his own words:—

“It inhabits every variety of wooded situation, in all parts of the colony, and is generally met with in small families. In flying the wings are moved very rapidly, but the bird does make progress in proportion to the apparent exertion; at times, when passing from tree to tree, its flight is graceful in the extreme.

“Its note is a loud *pee-pee*, which is often very much varied.

“The stomach is small but tolerably muscular; and the food, which consists of coleopterous and other insects, seeds and berries, is procured both on the ground and among the branches.

“The nest is built on an upright fork of the topmost branches of the smaller gum trees, and is formed of small dried sticks lined with soft grasses and feathers. The eggs are eleven and a half lines long by nine lines broad, of a rich orange-buff, obscurely spotted and blotched with a deeper tint, particularly at the larger end.”

The sexes offer but little difference in colour, but the female is somewhat smaller in all her admeasurements.

Forehead yellowish olive; lores, line beneath the eye and ear-coverts black; head and all the upper surface dull grey, with an indistinct line of brown down the centre of each feather, giving the whole a mottled appearance; wings and tail brown, margined at the base of the external webs with wax-yellow, the tail terminating in white; throat and under surface dull grey, becoming lighter on the lower part of the abdomen and under tail-coverts; the feathers of the breast with a crescent-shaped mark of light brown near the extremity, and tipped with light grey; irides dark brown; bare skin round the eye, bill, and bare patch on each side of the throat, bright yellow; legs and feet dull reddish yellow; claws dark brown.

The Plate represents the two sexes of the natural size.



MYZANTHA LUTEA, *Gould.*

Luteous Honey-eater.

Myzantha lutea, Gould in Proc. of Zool. Soc., Part VII. p. 134.

I CONSIDER this to be by far the finest species of the genus yet discovered, exceeding as it does every other both in size and in the brilliancy of its colouring. I am indebted to Messrs. Bynoe and Dring for fine specimens of this beautiful bird, which were obtained by those gentlemen on the north-west coast of Australia, in which part of the country it supplies the place of the *Myzantha garrula* of New South Wales. The law of representation is rarely carried out in a more beautiful manner, even in the ornithology of Australia, than in the members of the present genus; the *Myzantha garrula* being, so far as is yet known, confined to the south-eastern portion of the country, the *M. lutea* to the neighbourhood of the north coast, the *Myzantha obscura* to Swan River on the western coast, and the *M. flavigula* to the north-eastern portion of the country.

Naked space behind the eye, forehead and the tips of several feathers on the sides of the neck, fine citron-yellow; lores blackish brown with silvery reflexions; upper surface grey, the feathers of the back of the neck and back crossed near the tip with white; rump, upper tail-coverts and under surface white; throat and chest tinged with grey, each feather crossed by an arrow-shaped mark of brown; wings and tail brown, the external margins of the feathers dull citron-yellow; tail tipped with white; bill fine citron-yellow; feet yellowish brown.

The Plate represents the two sexes of the natural size



MYZANTHA FLAVIGULA, *Gould.*

Yellow-throated Miner.

Myzantha flavigula, Gould in Proc. of Zool. Soc., Part VII. p. 143.

THIS species inhabits the interior of New South Wales, where it is tolerably abundant in most of the belts of *Eucalypti* bordering the river Namoi and all similar situations : although it has many of the habits and actions of its near ally the *Myzantha garrula*, it is much more shy in disposition, less noisy, and more disposed to frequent the tops of the trees ; and so exclusively does it replace the common species in the districts alluded to that the latter does not occur therein.

I did not succeed in finding the nest, but the fact of my having shot very young individuals affords indubitable evidence that the bird breeds in the localities above-mentioned.

The sexes are alike in plumage.

Naked space behind the eye, forehead, upper part of the throat, and the tips of several feathers on each side of the neck citron-yellow ; rump and upper tail-coverts white ; back of the neck and back grey, each feather obscurely barred with white near the tip ; lores and ear-coverts black, the latter crossed with silvery grey ; throat, cheeks, and all the under surface white, the feathers of the chest crossed by an arrow-shaped mark of brown ; wings and tail dark brown, the outer webs of the primaries, many of the secondaries, and the basal portion of the tail-feathers dull citron-yellow ; all the tail-feathers tipped with white ; bill bright orange-yellow ; feet yellow ; irides leaden-brown.

The figures represent the two sexes of the natural size.



MYZANTHA MELANOPHRYS.

Australian Bell-bird.

Turdus melanophrys, Lath. Ind. Orn. Supp., p. xlii.

Black-browed Thrush, Lath. Gen. Syn. Supp., vol. ii. p. 185.—Shaw, Gen. Zool., vol. x. p. 206.—Lath. Gen. Hist., vol. v. p. 125.

Manorhina viridis, Vieill. Gal. des Ois., pl. 149.—Jard. and Selb. Ill. Orn., vol. ii. pl. 78.

Myzantha flavirostris, Vig. and Horsf. in Linn. Trans., vol. xv. p. 319.—Less. Man. d'Orn., tom. ii. p. 67.

Manorina viridis, Bonn. et Vieill. Ency. Méth. Orn., part ii. p. 692.—G. R. Gray, List of Gen. of Birds, 2nd Edit., p. 21.

Dilhong and *Dilring*, Aborigines of New South Wales (Latham).

Bell-bird of the Colonists.

IN its habits, actions and general economy the Bell-bird so closely resembles the Garrulous Honey-eater (*Myzantha garrula*), as not to justify its separation from the members of the group of which that is the acknowledged type. In strict justice, perhaps, Vieillot's name of *Manorhina*, which has the advantage of priority, should have been applied to all the members of this group, in which case the new species named by me as *Myzanthæ* must be termed *Manorhinæ*, and the former generic appellation sink into a synonym. The *Myzanthæ*, as I have before remarked, frequent the trees of the plains and the more open parts of the forest; the present bird, on the other hand, evinces a decided preference for, and appears to be strictly confined to dense and thick brushes, particularly such as are of a humid and swampy nature, and with the foliage of which the peculiar tint of its plumage closely assimilates. I frequently encountered it in companies of from ten to forty, and occasionally still greater numbers were seen disporting among the leafy branches in search of insects and displaying many varied actions, at one time clinging to and hanging down from the branches by one leg, and at another prying beneath the leaves, or flying with outspread wings and tail from tree to tree, and giving utterance to a peculiar garrulous note totally different in sound from the faint monotonous tinkle usually uttered, which has been justly compared to the sound of distant sheep-bells, and which, when poured forth by a hundred throats from various parts of the forest, has a most singular effect. The same appellation of Bell-bird having been given by the colonists of Swan River to a species inhabiting that part of Australia, I must here warn my readers against considering them identical, by informing them that the two birds are not only specifically but generically distinct.

The bird forming the subject of the present Plate has not as yet been observed out of New South Wales, where its peculiar province is the brushes; and if it departs from those which stretch along the coast from Port Philip to Moreton Bay, I believe it will only be found in those which clothe the sides of the higher hills, such as the Liverpool range and others of a similar character. Although it is stationary in New South Wales, and very abundant at Illawarra and in the brushes of the Hunter, I did not succeed in obtaining its nest or eggs.

The sexes are precisely alike in plumage, and the young soon attain the colouring of the adult.

Like the *Myzantha garrula* it is of a prying and inquisitive disposition, and the whole troop may be easily brought within the range of observation by uttering any kind of harsh squeaking note, when they will descend to ascertain the cause, and look around with the utmost curiosity. Its flight is of the same skimming motionless kind as that of the Garrulous Honey-eater; and upon some given signal the whole flock, or the greater portion of it, fly off simultaneously and descend to some neighbouring branch in a cluster.

The whole of the plumage, with the exception of the primaries and secondaries, yellowish olive, but the under surface much paler than the upper; forehead, stripe from the angle of the lower mandible, ring encircling and dilated into a spot above the eye, black; ear-coverts olive-brown; primaries and secondaries dark brown, the former margined with grey and the latter with yellowish olive; bill fine yellow; tarsi and toes fine orange-yellow; eye dark leaden brown; eyelash leaden grey; bare space below and behind the eye orange-red.

The Plate represents a male and a female of the natural size on a plant gathered in the brushes of Illawarra.



ZOSTEROPS DORSALIS, *Vig. and Horsf.*

Grey-backed Zosterops.

- Certhia caerulea*, Lath. Ind. Orn. Supp., p. xxxviii.
L'Heorotaire bleu, Vieill. Ois. dor., tom. ii. p. 121, pl. 83.
Bluish-breasted Creeper, Shaw, Gen. Zool., vol. viii. p. 244.
Cerulean Creeper, Lath. Gen. Syn. Supp., vol. ii. p. 188.
Cerulean Honey-eater, Lath. Gen. Hist., vol. iv. p. 204.
Sylvia lateralis, Lath. Ind. Orn. Supp., p. lv.
Rusty-side Warbler, Lath. Gen. Syn. Supp., vol. ii. p. 250.—Shaw Gen. Zool., vol. x. p. 659.—Lath. Gen. Hist., vol. vii. p. 140.
Certhia diluta, Shaw, Gen. Zool., vol. viii. p. 244.
Philedon caeruleus, Cuv.
Meliphaga caerulea, Steph. Cont. of Shaw's Gen. Zool., vol. xiv. p. 261.
Sylvia annulosa, var. β , Swains. Zool. Ill. 1st Ser., pl. 16.
Zosterops dorsalis, Vig. and Horsf. in Linn. Trans., vol. xv. p. 235.
White-eye, Colonists of New South Wales.
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THIS bird is stationary in all parts of Van Diemen's Land, New South Wales and South Australia, and is more numerous than any other bird inhabiting those countries; where it is not only to be met with in the forests and thickets, but also in nearly every garden, by the proprietors of which it is regarded more as a pest than, as one would suppose, a welcome visitor; no one of the birds of the country effecting greater damage to the buds and fruits of every kind. It even builds its nest and rears its young in the shrubs and rose-trees bordering the walks. I observed several nests in such situations in the garden of the Government House at New Norfolk, Van Diemen's Land. Among the trees of the forest the beautiful tea-tree (*leptospermum*?) is the one to which at all times this species evinces a great partiality. Were it not for its destructive propensities, the Grey-backed Zosterops must from its familiar disposition and pretty lively song be a very general favourite.

Its flight is quick and darting, and when among the branches of the trees it is as active as most birds, prying and searching with the most scrutinizing care into the leaves and flowers for the insects, upon which it feeds. It is sometimes seen singly or in pairs, while at others it is to be observed in great numbers, on the same or neighbouring trees. The southern and eastern portions of Australia, and the islands adjacent, are its true habitat; and the two succeeding plates will show how beautifully it is represented by allied species in other parts of the country.

The breeding-season commences in September and continues to January. The nest is one of the neatest structures possible; it is of a round deep cup-shaped form, composed of fine grasses, moss and wool, and most carefully lined with fibrous roots and grasses. The eggs are usually three in number, of a beautiful uniform pale blue, eight and a half lines long by six lines broad.

The sexes present no difference of plumage.

On examining the "Collection of Australian Drawings," formerly belonging to the late A. B. Lambert, Esq., and now in the possession of the Earl of Derby, who kindly forwarded them to me for the purposes of the present work, I find that this species was long since described by Latham, under the names above quoted; in neither of his descriptions, however, does he mention the white ring around the eye, which forms so conspicuous a feature in the appearance of the bird, the want of which would have precluded the possibility of my believing them to be identical, had not the drawings named by Latham's own hand proved such to be the case; the species should therefore stand as *Zosterops caerulea*, although *Z. lateralis* would certainly be more appropriate; unfortunately this fact did not come to my knowledge until after the Plate had been named, and the requisite number of impressions struck off. Latham refers to the 83rd Plate of the "Oiseaux Dorées," as identical with his *caerulea*, but of this as I have indicated above I am doubtful.

Crown of the head, wings and tail olive; back dark grey, eyes surrounded by a zone of white feathers, bounded in front and below with black; throat, centre of the abdomen, and under tail-coverts greyish white with a slight tinge of olive; flanks light chestnut brown; upper mandible dark brown, under mandible lighter; irides and feet greyish brown.

In some specimens the throat and sides of the head are wax-yellow, and the flanks are only stained with chestnut brown.

The Plate represents the male, female and nest of the natural size, on a branch of the tea-tree of Van Diemen's Land.



ZOSTEROPS CHLORONOTUS, *Gould.*

Green-backed Zosterops.

Zosterops chloronotus, Gould in Proc. of Zool. Soc., Part VIII. p. 165.

Jule-wè-de-lung, Aborigines of the lowland districts of Western Australia

Grape- and *Fig-eater*, Colonists of Swan River.

THE *Zosterops chloronotus* is an inhabitant of the western coast of Australia, where it constitutes a beautiful representative of the *Zosterops dorsalis* of the southern and eastern coasts. As might be supposed, the habits, manners, actions and economy of two species so nearly allied are very similar; hence the settlers of Swan River were not long in discovering that in this species they had found no friend to their gardens during the season when the fruits are ripening, whatever good it may effect by the destruction of insects at other periods.

Mr. Gilbert states that "This bird is particularly fond of figs and grapes, it consequently abounds in all the gardens where those plants are cultivated; and it is often to be seen as numerous as sparrows in England; besides feeding upon fruits, I have also observed it taking flies while on the wing after the manner of the true Flycatchers.

"Its note is a single plaintive one, several times repeated; and its flight is irregular, and of short duration.

"The breeding-season commences in August and ends in November; those nests that came under my observation during the earlier part of the season, invariably contained two eggs; but in October and November I usually found the number to be increased to three, and upon one occasion to four. The nest is small, compact, and formed of dried wiry grasses, bound together with the hairy tendrils of small plants and wool, the inside being lined with very minute fibrous roots; its breadth is about two inches, and depth one inch; the eggs are greenish blue without spots or markings, eight lines long by six lines broad."

Lores black; crown of the head and all the upper surface olive-green; primaries and tail-feathers brown, margined with olive-green; throat and under tail-coverts light greenish yellow; breast and under surface grey, tinged with brown on the abdomen and flanks; irides wood-brown; bill brown, lighter on the under mandible; legs and feet dark grey.

The figures are of the natural size.



ZOSTEROPS LUTEUS, *Gould.*

Yellow Zosterops.

Zosterops luteus, Gould, in Proc. of Zool. Soc.

THIS new species is an inhabitant of the northern portion of Australia. "I first met with it," says Mr. Gilbert, "in August, on Greenhill Island, Van Diemen's Gulf, dwelling among the mangroves or the densest thickets. It is much more wild and solitary than *Zosterops dorsalis*, and does not resort like that bird to the gardens and the neighbourhood of the houses of the settlers; its note is also very different, being a pretty canary-like song, instead of the long drawn-out note of *Z. dorsalis*. When disturbed it usually left the thicket for the higher branches of the gum-trees, where it was effectually hidden from view by the thick foliage. It was generally met with in small families of from three to seven or eight in number."

All the upper surface olive-yellow; primaries and tail-feathers brown, margined with olive-yellow; forehead and throat pure yellow; lores and line beneath the eye black; eye encircled with a zone of white feathers; abdomen and under tail-coverts dull yellow; irides light reddish brown; upper mandible blackish grey, the basal half rather lighter; apical third of the lower mandible blackish grey; basal two-thirds light ash-grey; legs and feet bluish grey.

The figures are of the natural size.



CUCULUS OPTATUS, *Gould.*

Australian Cuckoo.

Cuculus optatus, Gould in Proc. of Zool. Soc., Part XIII. p. 18.

It is no less remarkable than true, that when we are in countries far distant from that which gave us birth, our minds are strongly disposed to seize upon any objects presenting associations connected with our native land ; whatever reminds us of our own country becomes immediately interesting, and its productions acquire a triple value. By the colonists of New South Wales and Van Diemen's Land, a stripling oak or an elm, a violet or a primrose are regarded as treasures ; and a caged blackbird or lark is more prized than a bird of paradise would be here ; how welcome then to the settlers will be this Cuckoo, when the part of Australia in which it is found becomes inhabited by Englishmen ! Here, as in Europe, it is the harbinger of spring, and an index of the revivifying of nature, and its voice will be heard with even greater sensations of pleasure than was that of its representative in Europe.

I think I hear my readers remark, " Surely this is the true Cuckoo of Europe ; and if so, why give it a new name ?" To this I may answer, that I can trace distinctions, which in my opinion warrant me in stating the Australian bird to be a distinct species ; specific characters, which, although appearing very trivial to the general observer, are so apparent to the ornithologist, that he can always distinguish an Australian specimen from one killed in Europe. In the Australian bird the black bands on the breast are broader and more defined than in the European, and in the former a light fawn tint pervades the abdomen, which part is white in the latter ; the claws of the Australian bird are also smaller and more delicate than those of its northern ally ; the breast, neck and head of the immature Australian bird are more broadly and distinctly barred with black and white, while the rufous tint which pervades the body of the immature European Cuckoo is almost, if not wholly, wanting.

The northern part of Australia is the only locality in which this bird has been found ; the specimens in my collection, as I learn from the labels attached, were killed in the month of January : whether it utters the word ' Cuckoo ' or not I am unable to say, but it is most likely that in this respect it also closely assimilates to its European relative.

All the upper surface slaty grey ; inner webs of the primaries broadly barred with white ; tail-feathers dark violet-brown, with a row of oblong spots of white, placed alternately on either side of the stem, and slightly tipped with white ; the lateral feathers have also a row of white spots on the margin of their inner webs ; chin and breast light grey ; all the under surface buffy white, crossed by bands of black ; irides, bill and feet orange.

The Plate represents a male of the natural size.



CUCULUS INORNATUS, *Vig. and Horsf.*

Unadorned Cuckoo.

Cuculus inornatus, Vig. and Horsf. in Linn. Trans., vol. xv. p. 297.

—— *albostrigatus*, Ib., p. 298. young.

Dju-dur-run, Aborigines of Western Australia.

Greater Cuckoo of the Colonists.

The southern portion of Australia generally, and the island of Van Diemen's Land, are inhabited by this species of Cuckoo; to the latter country, however, it is only a summer visitant, and a partial migration also takes place in the adjacent portion of the continent, as is shown by its numbers being much fewer during winter. Its migratory movement seems to be regulated, as in most other instances, by the more or less abundant supply of food necessary for its sustenance. It arrives in Van Diemen's Land in the month of September, and departs northward in February. During the vernal season it is an animated and querulous bird, and it may then be seen either singly, or two or more males engaged in chasing each other from tree to tree. Its ringing whistling call, which consists of a succession of running notes, the last and highest of which are several times rapidly repeated, is often uttered while the bird is at rest among the branches, and also occasionally while on the wing. Its food consists of caterpillars, *Phasmidæ* and coleopterous insects, which are generally procured among the leafy branches of the trees, and in searching for which the bird displays considerable activity, and great power of traversing the smaller limbs. When desirous of repose after feeding, it perches on the topmost dead branches of the trees, on the posts and rails of the fences, or any other prominent site whence it can survey all around. It is however by no means a shy bird, and but little caution is required to approach within gun-shot. Its flight is straight and rapid, and not unlike that of the *Cuculus canorus*, to which it bears a close resemblance in everything except its note; occasionally it mounts considerably above the tops of the trees, and it is capable of sustaining a long-continued flight.

In respect to its reproduction it is strictly parasitic, devolving the task of incubation on the smaller birds, many species of which are known to be the foster-parents; among them may be enumerated the various *Melithrepti*, *Ptiloti*, *Mahori*, *Acanthizæ*, &c. After the young has left the nest and attained a considerable size, it is not unusual to see it fed by two or more species at the same time; this I have witnessed with my own eyes; the young Cuckoo, in fact, selects some low dead branch in an open glade of the forest, from which it seldom moves during the day, as a convenient situation for its various foster-parents to supply it with food, for the procuring and supplying of which all the smaller birds appear to have entered into a mutual compact.

The specimens of this bird from Western Australia are somewhat smaller, and have the white marks of the tail less distinct than specimens from Van Diemen's Land, but these differences are too trivial to be regarded as other than mere local variations. When fully adult the plumage is nearly of a uniform brown, with the inner webs of the wing and tail-feathers relieved by bars and markings of white; the immature colouring on the contrary presents a variegated and very diversified character, which, owing to the constant change taking place, cannot be described so as to render it clear to my readers. When the young leaves the nest, the throat, face and shoulders are black, the feathers of the remainder of the body crossed and spotted with buff; the black colouring gradually gives place to the grey of the under surface, while the buffy marks of the upper surface are retained even after the second or third moult; it breeds in this state, and it is doubtful whether in the female it is ever entirely cast off.

The stomachs of those dissected were found to be capacious, membranous, and thickly lined with hair.

The egg is about seven-eighths of an inch long by five-eighths broad, and is of a cream-colour speckled all over with markings of brown.

The adult male has the head, neck and all the under surface brownish grey, with a streak of dark brown down the sides of the neck; all the upper surface olive-brown, becoming much darker on the wings and tail; basal portion of the inner webs of the primaries broadly barred with white; tail-feathers barred on the margins of both webs with white, slightly on the outer and deeply on the inner; all the feathers tipped with white, and with a mark of white on the stem near the tip, this mark being very small on the central tail-feather, and gradually increasing on the lateral feathers until on the outer it forms a band; under-irides very dark brown; eyelash yellow; gape and inside of the mouth rich deep orange; feet olive.

The female differs in having the upper surface mottled with buff and rufous, in having a triangular spot of reddish buff at the extremity of each of the wing-coverts, and the markings of the tail buff instead of white; all which markings may in very old birds give place to a style of colouring similar to the male.

The young, independently of the differences pointed out above, has the feet yellowish olive, the soles of the feet yellow; the bill yellowish olive, the corner of the mouth and the tip of the bill being more yellow than the rest of that organ; irides greyish brown.

The figures represent the two sexes of the natural size.



CUCULUS CINERACEUS, *Vig. and Horsf.*

Ash-coloured Cuckoo.

Cuculus cineraceus, Vig. and Horsf. in Linn. Trans., vol. xv. p. 298.

——— *incertus*, Ib. p. 299, young.

——— *variolosus*, Ib. p. 300, very young.

Barred-tailed Cuckoo, Lath. Gen. Hist., vol. iii. p. 310 ?

Cuculus flabelliformis, Lath. Ind. Orn. Supp., p. xxx. ?—Shaw, Gen. Zool., vol. ix. p. 96 ?

Fan-tailed Cuckoo, Lath. Gen. Syn. Supp., vol. ii. p. 138. pl. 126 ?—Ib. Gen. Hist., vol. iii. p. 305. pl. lvii. ?

Du-laar, Aborigines of the lowland districts of Western Australia.

Lesser Cuckoo of the Colonists.

THIS is a migratory species, arriving in Van Diemen's Land in September, and after spending the summer months therein, departing to the northward in January. In the southern parts of the continent of Australia solitary individuals remain throughout the entire winter, as evidenced by my having observed it in South Australia in July : I have never seen individuals from the north coast ; I therefore infer that its migratory movements are somewhat restricted ; in all probability the 26th degree of latitude may be the extent of its range to the northward. During the summer months, its distribution over the southern portion of the continent may be said to be universal, but withal it is rather a solitary bird and loves to dwell in secluded situations, where but for its loud ringing call, which much resembles its aboriginal name, it would easily escape detection.

It flies rather heavily, and on alighting moves the tail up and down for some time ; a similar movement of the tail also invariably precedes its taking flight.

Like the other species of Cuckoo, it deposits its single egg in the nest of some one or other of the smaller kinds of birds : it is of a perfectly oval form, of a flesh-white sprinkled all over with fine spots of purplish brown, nine or ten lines long by seven and a half lines broad.

The stomach is capacious, membranous, and lined with hairs ; and the food consists of the larvæ of insects of various kinds.

The sexes are alike in plumage, but the female is a trifle smaller than her mate.

Head and all the upper surface dark slate-grey ; wings brown, glossed with green ; tail dark glossy greenish brown, each feather toothed on the edge with white, the extent of which gradually increases until on the lateral feathers they assume the form of irregular interrupted bars ; on the edge of the shoulder a short narrow stripe of white ; on the under surface of the wing an oblique band of white ; chin grey ; under surface ferruginous ; bill black, except at the base of the lower mandible, where it is fleshy orange ; irides dark brown ; eyelash beautiful citron-yellow ; feet yellowish olive.

The figures are of the size of life.



CUCULUS INSPERATUS, *Gould.*

Brush Cuckoo.

Cuculus insperatus, Gould in Proc. of Zool. Soc., Part XIII. p. 19.

WHILE traversing the cedar brushes of the Liverpool range on the 26th of October, 1839, my attention was attracted by the appearance of a Cuckoo, which I at first mistook for the *Cuculus cineraceus*, but which on examination proved to be the new species here represented; this example was the only one I ever saw living, and a single skin is all that has since been sent to me from New South Wales; it must therefore be very rare in the south-eastern portion of the continent, but it is doubtless equally as common a few degrees to the northward. At Port Essington there is a nearly allied species differing from the present in being much smaller, and in having a browner tint on the under surface; to this bird I have given the specific appellation of *dumetorum*; but as it closely resembles the species here represented, it will not be necessary to give a figure of it.

On comparison, this species will be found to differ from *C. cineraceus*, for which it might be readily mistaken, in its smaller size, in the more square form of the tail, and in that organ being destitute of white markings on the outer webs of the feathers. In its structure and colouring it will be found to depart from the true *Cuculi* and to approximate to the members of the genus *Chalcites*, and in fact to form one of the links which unite the two groups.

Head, throat and all the upper surface dark slate-grey; back and wings glossed with green; tail glossy brownish green, each feather tipped with white, and with a row of triangular-shaped white markings on the margins of the inner webs; primaries and secondaries with a patch of white on their inner webs near the base; edge of the shoulder white; under surface of the shoulder, vent and under tail-coverts rufous; remainder of the under surface grey, washed with rufous; bill black; feet olive.

The figures are of the natural size.



CHALCITES OSCULANS, *Gould.*

Black-eared Cuckoo.

Chalcites osculans, Gould in Proc. of Zool. Soc., Part XV. p. 32.

Black-eared Cuckoo, Colonists of Swan River.

Four examples of this species are all that have come under my notice—one from Swan River, two killed by myself in New South Wales, and one in the collection of H. E. Strickland, Esq. Judging from the little that I saw of this species in a state of nature, its habits were those common to the members of the genus in which I have placed it; thick shrubby trees of moderate height appeared to be its favourite resort, and its food to consist of insects obtained among the branches and from off the leaves, and in search of which it hops about with stealthiness and quietude; further than this, little is known respecting it. One of my specimens was killed near Gundermein on the Lower Namoi, on the 24th of December 1839; but the true habitat of the species has not yet been discovered. That it is confined to Australia is almost certain, but this can only be verified by future research.

Although the structure of this bird evinces a slight departure from the true *Chalcites*, and an affinity to that of the typical *Cuculi*, I have retained it in the former genus because it possesses the stiff rigid wings, short and square tail, and the luminous colouring of the upper surface common to the other members of that group.

Mr. Gilbert, who once observed this bird in Western Australia, states that it is very shy, and that he only met with it in the interior of the country. It utters a feeble, lengthened and plaintive note at long intervals. It flies slowly and heavily, and but short distances at a time. The stomach is thin and capacious, and slightly lined with hairs.

Head, all the upper surface and wings glossy olive-brown, becoming darker on the shoulders and primaries, and fading into white on the upper tail-coverts; tail dark olive-brown, each feather tipped with white, and the lateral one on each side crossed on the inner web with five bars of white; ear-coverts black, encircled with white; under surface of the wing, throat, breast and abdomen pale cinnamon-brown, fading into white on the under tail-coverts; bill very dark brown; irides dark blackish brown; tarsi and upper surface of the feet greenish grey; under surface of the feet and the back of the tarsi mealy fleshy grey.

The figures are of the natural size.



CHRYSOCOCCYX LUCIDUS.

Shining Cuckoo.

Cuculus lucidus, Gmel. Edit. of Linn. Syst. Nat., tom. i. p. 421.—Lath. Ind. Orn., vol. i. p. 215.—Shaw, Gen. Zool., vol. ix. p. 126. pl. 26.—Temm. Pl. Col. 102. fig. 1.—Vig. & Horsf. in Linn. Trans., vol. xv. p. 301.—Vieill. 2nde Edit. du Nouv. Dict. d'Hist. Nat., tom. viii. p. 233.—Ib. Ency. Méth., tom. iii. p. 1335. pl. 219. fig. 1.

Shining Cuckoo, Lath. Gen. Syn., vol. ii. p. 528. pl. 23.—Ib. Gen. Hist., vol. iii. p. 299. pl. lvi.

Chalcites lucidus, Less. Traité d'Orn., p. 153.

Dju-reet, Aborigines of the lowland districts of Western Australia.

Golden or Bronze Cuckoo of the Colonists.

This species is very widely dispersed, being an inhabitant of every part of the Australian continent and Van Diemen's Land. In the latter country it is strictly migratory, arriving in September and departing again in January. If it be not so truly migratory in New South Wales, the great mass certainly retire in winter to the northward, where insect food is more abundant. I have, however, seen it in the Botanic Garden at Sydney in the month of March. Its food consists of insects of various orders, the stomachs of those examined containing the remains of *Hymenoptera*, *Coleoptera*, and caterpillars. While searching for food, its motions, although very active, are characterized by a remarkable degree of quietude, the bird leaping about from branch to branch in the gentlest manner possible, picking an insect here and there, and prying for others among the leaves and the crevices of the bark with the most scrutinizing care. Its flight is rather quick and undulating, and when passing from one tree to another on a sunny day, the brilliant green colouring of the male shows very beautifully. Like the true Cuckoos, it always deposits its single egg in the nest of another bird: in Van Diemen's Land those of the *Malurus longicaudus* and *Acanthiza Diemenensis* are generally selected; in New South Wales the *Malurus cyaneus* and the *Acanthiza chysorrhæa* are among others the foster-parents; in Western Australia the nests of the various kinds of Honey-eaters, and the *Malurus splendens*, are resorted to; and it is a remarkable fact, that the egg is mostly deposited in a domed nest, with a very small hole for an entrance.

The stomach is capacious, membranous, and slightly lined with hair.

Its note is a mournful whistle, very like that usually employed to call a dog.

The egg is of a clear olive-brown, somewhat paler at the smaller end, about eleven-sixteenths of an inch long by half an inch in breadth.

The adult male has the head, all the upper surface and wings, of a rich coppery bronze; primaries brown with a bronzy lustre; tail bronzy brown, crossed near the tip with a dull black band; the two lateral feathers on each side with a series of large oval spots of white across the inner web, and a series of smaller ones opposite the interspaces on the outer web; third and fourth feathers on each side with a small oval spot of white at the tip of the inner web; all the under surface white, crossed by numerous broad conspicuous bars of rich deep bronze; irides brownish yellow; feet dark brown, the interspaces of the scales mealy.

The female is similarly marked, but has only a wash of the bronzy colouring on the upper surface, and the bars of the under surface much less distinct, and of a brown hue.

The young, which are brown, with a still fainter wash of bronze, have the throat and under surface grey, without any trace of the bars, except on the under surface of the shoulder; the base of the tail-feathers deep rusty red, the irides bright grey, and the corners of the mouth yellow.

The Plate represents the male, female, and young, of the natural size.



SCYTHROPS NOVÆ-HOLLANDIÆ, *Lath.*

Channel-Bill.

Scythrops Novæ-Hollandiæ, Lath. Ind. Orn., vol. i. p. 141.—Temm. Man. d'Orn., tom. i. p. lxxv.—Vig. and Horsf. in Linn. Trans., vol. xv. p. 306.—Temm. Pl. Col., 290.—Vieill. Gal. des Ois., tom. i. pl. 39.—Less. Traité d'Orn., p. 128. pl. 23. fig. 1.—Ib. Man. d'Orn., tom. ii. p. 128.—G. R. Gray, List of Gen. of Birds, 2nd Edit., p. 73.—Vieill. Nouv. Dict. d'Hist. Nat., tom. xxx. p. 456.—Ib. Ency. Méth., tom. iii. p. 1427.

Psittaceous Hornbill, Phil. Bot. Bay, pl. in p. 165.

Anomalous Hornbill, White's Journ., pl. in p. 142.

Channel-Bill, Lath. Gen. Syn. Supp., vol. ii. p. 96. pl. 124.

Australasian Channel-Bill, Shaw, Gen. Zool., vol. viii. p. 378. pl. 50.—Lath. Gen. Hist., vol. ii. p. 300. pl. xxxvii.

Scythrops Australasiæ, Shaw, Gen. Zool., vol. viii. p. 378.—Ib. Steph. Comt., vol. xiv. p. 95.

——— *Australis*, Swains. Class. of Birds, vol. ii. p. 299.

Curriay-gun, Aborigines of New South Wales.

THIS remarkable bird, which has been considered a Hornbill by some naturalists, and as nearly allied to the Toucans by others, is in reality a member of the family *Cuculidæ* or Cuckoos; an examination of its structure and a comparison of it with that of the other species of the family will render this very apparent, and I may add, that the little I saw of it in a state of nature fully confirms the opinion here given; its habits, actions, and mode of flight are precisely the same, as is also the kind of food upon which it subsists, except that it devours the larger kinds of *Phasmidæ* and *Coleoptera* instead of the smaller kinds of insects eaten by the other members of the family, and that it occasionally feeds upon fruits; the changes too which it undergoes from youth to maturity are exactly similar.

It is a migratory bird in New South Wales, arriving in October and departing again in January; whither it proceeds is not known, but as it has not been found out of Australia nor even on the north coast of that country, it cannot retire very far. As I had but few opportunities of observing it myself, I cannot do better than transcribe the particulars recorded by Latham, who in the second volume of his 'General History of Birds,' says, "It is chiefly seen in the morning and evening, sometimes in small parties of seven or eight, but more often in pairs; both on the wing and when perched it makes a loud screaming noise when a hawk or other bird of prey is in sight. In the crop and gizzard the seeds of the red gum and peppermint trees have been found; it is supposed that they are swallowed whole, as the pericarp or capsule has been found in the stomach; exuviae of beetles have also been seen, but not in any quantity. The tail, which is nearly the length of the body, is occasionally displayed like a fan, and gives the bird a majestic appearance. The natives appear to know but little of its habits or haunts; they consider its appearance as an indication of blowing weather, and that its frightful scream is through fear, as it is not a bird of very active or quick flight. It is not easily tamed, for Mr. White observes, that he kept a wounded one alive for two days, during which it would eat nothing, but bit everything that approached it very severely."

New South Wales is the only one of the Australian colonies whence I have seen examples of this bird. Most naturalists will be anxious to know if, like the other Cuckoos, this species is parasitic; unfortunately however I am not able to clear up this point: but I possess an egg which has been recently sent me by Mr. Strange of Sydney; it is fully developed, and he informs me was taken by himself from the ovarium of a female after he had shot the bird. It is of a light stone-colour, marked all over, but particularly at the larger end, with irregular blotches of reddish brown, many of which are of a darker hue and appear as if beneath the surface of the shell; it is one inch eleven-sixteenths long by one inch and a quarter broad.

The sexes are alike in plumage, but the female is somewhat smaller than the male.

Head, neck and breast grey; all the upper surface, wings and tail greenish olive-grey, each feather largely tipped with blackish brown; tail crossed near the extremity by a broad band of black and tipped with white, which gradually increases in extent as the feathers recede from the centre; the inner webs are also largely toothed with white, which is bounded posteriorly with a broad streak of black; under surface of the wing and body buffy white crossed with indistinct bars of greyish brown, which gradually deepen in colour on the flanks and thighs; orbits and lores scarlet; bill light yellowish horn-colour; feet olive-brown.

The Plate represents a male rather less than the natural size.



EUDYNAMYS FLINDERSII.

Flinders's Cuckoo.

Eudynamys Orientalis, Vig. and Horsf. in Linn. Trans., vol. xv. p. 304.

— — — *Flindersii*, Lath. MSS. Ibid., p. 305, young.

Flinders's Cuckoo, Lath. Gen. Hist., vol. iii. p. 308.

Cuculus cyanocephalus, Lath. Ind. Orn. Supp., p. xxx.—Shaw, Gen. Zool., vol. ix. p. 110.

Blue-headed Cuckoo, Lath. Gen. Syn. Supp., vol. ii. p. 137.—Ib. Gen. Hist., vol. iii. p. 310.

Eudynamis Australis, Swains. Anim. in Menag., p. 344.

This species differs from the *Eudynamys* inhabiting Java, which may be the true *Orientalis*, in having a more slender bill, and in being a less robust and powerful bird; the young of the first year also exhibits changes not quite in accordance with those of the young of the species from the Indian islands. It will be seen by the list of synonyms quoted above, that the young and the adult have been considered as distinct species, and that the name of *Flindersii*, which I have retained from its priority, has been applied to the bird in one of the earliest stages of its existence after leaving the nest, when the prevailing tints of its plumage are rufous brown, with transverse markings of dark brown; from this state until the bird attains maturity, many parti-coloured changes of plumage occur; but whether the sexes when fully adult are alike in colouring, I have not been able to ascertain; I am inclined to think they are not, and that the specimens having the upper surface regularly spotted with white on a bronzed olive ground, and with zigzag marks or bars on the buffy white of the under surface, are adult females; of this state I have given a figure on the annexed Plate, as well as a representation of the old male.

The portions of Australia inhabited by this bird are the eastern, northern, and north-western; it is very abundant in all the brushes of the east coast, from the river Hunter to Moreton Bay, and thence round to Torres Straits; it was also found in considerable abundance by His Excellency Governor Grey on the north-west coast. I did not meet with it myself, and I regret to say that no information has yet been obtained respecting its habits and manners. If it be parasitic or not, is a point I would gladly know; it is consequently one of those objects to which I would especially direct the attention of persons residing in the localities frequented by it.

The adult male has the entire plumage deep glossy greenish blue-black, the green tint predominating on the back and wings; irides red; bill yellowish olive; feet purplish black.

The adult female has the head and neck glossy greenish black; back, wings and tail bronzy brown, with numerous oblong spots of white on the back and wing-coverts, the remainder of the wing crossed by irregular bars of white stained with rufous; tail regularly barred with white stained with rufous, and slightly tipped with white; line from the angle of the mouth and all the under surface white stained with buff, spotted with black on the sides of the throat, and crossed on the abdomen and under tail-coverts with narrow irregular lines of blackish brown.

The young has the head and upper surface mingled bronze and buff, disposed in large patches; wing-coverts reddish buff, crossed by narrow bands of brown; remainder of wings and tail bronzy brown, crossed by bands of rufous; under surface rufous, crossed by narrow bars of blackish brown; tail-feathers longer and more pointed than in the adult.

The Plate represents an adult male and female of the natural size.



eyes red-
bill black nearly
off horn colour

CENTROPUS PHASIANUS.

Pheasant Cuckoo.

Cuculus Phasianus, Lath. Ind. Orn. Supp., p. xxx.

Centropus Phasianus, Temm. Man. d'Orn., tom. i. p. lxxiv.—Vig. and Horsf. in Linn. Trans., vol. xv. p. 306.

Polophilus Phasianus, Leach, Zool. Misc., pl. 46.—Shaw, Gen. Zool., vol. ix. p. 48. pl. 11.

Pheasant Cuckoo, Lath. Gen. Syn. Supp., vol. ii. p. 137.—Ib. Gen. Hist., vol. iii. p. 240.

Polophilus leucogaster, Leach, Zool. Misc., vol. i. p. 177. pl. 52.—Shaw, Gen. Zool., vol. ix. p. 49. pl. 12.

New Holland Coucal, Lath. Gen. Hist., vol. iii. p. 250.

Polophilus variegatus, Leach, Zool. Misc., vol. i. pp. 116, 117. pl. 51.—Shaw, Gen. Zool., vol. ix. p. 47. pl. 10.

Variegated Coucal, Lath. Gen. Hist., vol. iii. p. 250.

Centropus variegatus, Vig. and Horsf. in Linn. Trans., vol. xv. p. 306.

Mun-jë-ree-woo, Aborigines of Port Essington.

PERHAPS there is no one group of the Australian Birds less understood than the members of the genus *Centropus*. The numerous examples in my collection I consider to be referable to two, if not to three distinct species, presenting, however, but slight differences from each other. The *Centropus* inhabiting New South Wales differs from that found at Port Essington in having a much shorter and more arched bill, and in being somewhat smaller in size; specimens from the western coast again differ in being smaller than the bird of New South Wales, in having a more attenuated bill and a more uniform colouring of the tail: having thus pointed out the particulars in which the birds differ from each other, it will only be necessary to figure one of them. The old term of *Phasianus* should be retained for the New South Wales bird, while that of *macrourus* might be applied to the one from Port Essington, and *melamurus* to that from North-Western Australia, should they ultimately prove to be distinct. The greater part then of the coast-line of New South Wales, the eastern, northern and north-western portions of Australia generally are tenanted by *Centropi*, but only in such situations as are favourable to their habits, namely swampy places among the brushes abounding with tall grasses and dense herbage, among which they run with facility, and when necessity prompts, fly to the lower branches of the trees, from which they ascend in a succession of leaps from branch to branch until they nearly reach the top, and then they fly off to a neighbouring tree. The most westerly part of New South Wales in which I have heard of their existence is Illawarra, where they are rather rare, and from whence to Moreton Bay they gradually increase in numbers.

The nest, which is placed in the midst of a tuft of grass, is of a large size, composed of dried grasses, and is of a domed form with two openings, through one of which the head of the female protrudes while sitting, and her tail through the other. At Port Essington the nest is sometimes placed among the lower leaves of the *Pandanus*, but this occurrence seems to be rare; a large tuft of long grass being most frequently selected, as affording a better shelter. The eggs are from three to five in number, nearly round, and of a dirty white, in some instances stained with brown, and with a rather rough surface, somewhat like that of the eggs of the Cormorant; they are about one inch and four lines long by one inch and two lines broad.

By dissection I learn that the males are always smaller than the females; it also appears that when fully adult both sexes are alike in plumage, and have the bill, head, neck and abdomen black, whereas the young has the bill horn-colour, and the same parts which are black in the adult, of a deep brown with a tawny stripe down the centre of each feather.

The adults have all the feathers of the upper and under surface dull black with glossy black shafts; wing-coverts mottled tawny brown and black, each feather with a conspicuous tawny shaft; remainder of the wing rich reddish chestnut crossed with irregular double bars of black, the interstices between which fade into tawny on the outer webs of the primaries; lower part of the back and upper tail-coverts deep green freckled with black; tail dark brown glossed with green, and minutely freckled with rufous and pale tawny, the latter hue assuming the form of irregular and interrupted bars, all but the two centre feathers tipped with white; bill black; feet leaden black, the scales lighter.

The young have all the upper surface reddish brown with glossy conspicuous tawny shafts; the throat and breast tawny with lighter-coloured shafts; in other respects the colouring is similar to the adult, except that the markings of the tail are more distinct.

The eyes of the birds in New South Wales are said to be black, while those of Port Essington are red.

The Plate represents an adult and an immature bird about two-thirds of the natural size.



Kingfisher
1850

CLIMACTERIS SCANDENS, Temm.

Brown Tree-Creeper.

Buff-winged Honey-eater, Lath. Gen. Hist., vol. iv. p. 178.

Climacteris scandens, Temm. Pl. Col. 281. fig. 2.—Vig. and Horsf. in Linn. Trans., vol. xv. p. 296.

THE BROWN Tree-Creeper inhabits the whole of the south-eastern portion of the Australian continent, from South Australia to New South Wales. It gives a decided preference to the open thinly-timbered forests of *Eucalypti*, as well as the flats studded with the apple-trees (*Angophoræ*), the bark of which, being rough and uneven, affords numerous retreats for various tribes of insects; its food, however, is not only sought for upon the boles and branches of the trees, but is obtained by penetrating the decayed and hollow parts; and it even dives into the small hollow spouts of the branches in search of spiders, ants, and other insects: although its form would lead to a contrary supposition, it spends much of its time on the ground, under the canopy and near the boles of the larger trees, in a similar pursuit, and also traverses the fallen trunks with a keen and scrutinizing eye. While on the ground it has a pert lively action, passing over the surface in a succession of quick shuffling hops, carrying its head erect with the feathers puffed out, almost in the form of a crest. Among the trees it assumes all the actions of the true Creeper, ascending the upright boles, and traversing with the greatest facility both the upper and under sides of the branches. It never descends with the head downwards, like the members of the genera *Sitta* and *Sittella*; still I have seen it descend an upright bole for a short distance, by hopping or shuffling backwards, as it were, generally making a spiral course.

It flies with a skimming motion of the wings, during which the brown marking of the primaries is very conspicuous.

Like many other insectivorous birds in Australia, it seldom, if ever, resorts to the water for the purpose of drinking. It has a sharp piercing cry, which is frequently uttered, especially if the tree upon which it is climbing be approached.

The breeding-season commences in August and continues until January. The nest is generally placed deep down in a hollow branch, and those I found were entirely composed of the hair of the Opossum, and, judging from its brightness and freshness, had doubtless been plucked from the living animal while reposing in the hollow trees. The eggs in all the nests I took were two in number, of a reddish flesh-colour, thickly blotched all over with reddish brown; they are ten and a half lines long by eight lines broad.

The male has the crown of the head blackish brown; lores black; line over the eye and the throat dull buff; at the base of the throat a few indistinct blackish brown spots; all the upper surface rufous brown; primaries blackish brown at the base and light brown at the tip, all but the first crossed in the centre by a broad band of buff, to which succeeds another broad band of blackish brown; tail brown, all but the two centre feathers crossed by a broad band of blackish brown; all the under surface greyish brown, each feather of the chest and abdomen having a stripe of dull white, bounded on either side with black, running down the centre; under tail-coverts reddish buff, crossed by irregular bars of black; irides, bill and feet blackish brown.

Little difference is observable either in the colour or size of the sexes; the female may, nevertheless, be at once distinguished from her mate by the spots at the base of the throat being rufous instead of blackish brown as in the male.

The figures are those of a male and a female of the natural size.

Pl. B. 1891



CLIMACTERIS RUFA, *Gould.*

Rufous Tree Creeper.

Climacteris rufa, Gould in Proc. of Zool. Soc., Part VIII. p. 149.

Jin-nee, Aborigines of the mountain districts of Western Australia.

In its robust form and general contour this new species closely resembles the *Climacteris scandens*, but from which it is readily distinguished by the rufous colouring of its plumage.

It is an inhabitant of Western Australia, and is a beautiful analogue of the *C. scandens* of the eastern coast. It is a common bird at Swan River, where Mr. Gilbert states it is generally most abundant in the white gum forests abounding with the white ant: it ascends the smooth bark of the *Eucalypti*, and traverses round the larger branches with the greatest facility, feeding, like the other members of the genus, upon insects of various kinds. Mr. Gilbert also states that it is frequently to be seen on the ground, searching for ants and their larvæ, and in this situation presents a most grotesque appearance, from its waddling gait, which, to use his own words, is "between a hop and a shuffle, at the same time erecting and puffing out its head-feathers; when disturbed it ascends rather rapidly to the extremity of some lofty dead branch.

"Its note is a single piercing cry, uttered more rapidly and loudly when the bird is disturbed, and having a very singular and striking effect amidst the silence and solitude of the forest.

"At times it flies rather swiftly, but appears to be very soon tired, for after flying two or three hundred yards it begins to droop, as if from fatigue; it consequently never takes long flights, merely resorting to this mode of progression to move from tree to tree: during flight the motion of the wings is equal until the bird begins to descend.

"It makes a very warm nest of soft grasses, the down of flowers and feathers, in the hollow part of a dead branch, generally so far down that it is almost impossible to get at it, and it is, therefore, very difficult to find. I discovered one by seeing the old birds beating away a Wattle-bird that tried to perch near their hole; the nest, in this instance, was fortunately within arm's length; it contained three eggs of a pale salmon colour, thickly blotched all over with reddish brown, eleven lines long by eight and a half lines broad: this occurred during the first week in October.

"The stomach is large and tolerably muscular."

The male has the crown of the head, all the upper surface and wings dark brown; rump and upper tail-coverts tinged with rufous; primaries brown, all but the first crossed by a broad band of rufous, to which succeeds a second broad band of dark brown; two centre tail-feathers brown, indistinctly barred with a darker hue; the remainder pale rufous, crossed by a broad band of blackish brown, and tipped with pale brown; line over the eye, lores, ear-coverts, throat, and under surface of the shoulder rust-brown; chest crossed by an indistinct band of rufous brown, each feather with a stripe of buffy white, bounded on each side with a line of black down the centre; the remainder of the under surface deep rust-red, with a faint line of buffy white down the centre of each feather, the white line being lost on the flanks and vent; under tail-coverts light rufous, with a double spot of blackish brown at intervals along the stem; irides dark reddish brown; bill and feet blackish brown.

The female is rather less in size; is of the same colour as the male, but much lighter, without the bounding line of black on each side of the buff stripes on the breast, and having only an indication of the double spots on the under tail-coverts.

The figures are those of a male and a female of the natural size.



CLIMACTERIS ERYTHROPS, *Gould.*

Red-eyebrowed Tree-Creeper.

Climacteris erythropus, Gould in Proc. of Zool. Soc., Part VIII. p. 148.

I OBTAINED this new and highly interesting species while encamped on the low grassy hills under the Liver pool range: from the manner of its ascending the trees and keeping almost entirely to the small upright stems of the *Casuarina*, I believed it to be the White-throated Tree-Creeper (*Climacteris picumnus*); but having made it a rule to shoot an example of every species I observed in each newly-visited locality, I was in this instance rewarded with the acquisition of a new bird, which I afterwards found was numerous in this part of the country. But whether it is generally distributed over the colony, or merely confined to such districts as have a similar character to those in which I found it, I had no opportunity of ascertaining. So far as I could observe, its habits and manners bore a striking resemblance to those of the *Climacteris Picumnus*.

One singular feature connected with this species, is the circumstance of the female alone being adorned with the beautiful radiated rufous markings on the throat, the male having this part quite plain; this I ascertained beyond a doubt by the dissection of numerous specimens of both sexes; it is true that a faint trace of this character is observable both in *Climacteris scandens* and *C. rufa*, but the present is the only species of the genus in which this reversion of a general law of nature is so strikingly apparent.

The male has the crown of the head blackish brown, each feather margined with greyish brown; lores and a circle surrounding the eye reddish chestnut; back brown; sides of the neck, lower part of the back, and upper tail-coverts grey; primaries blackish brown at the base and light brown at the tip, all but the first crossed in the centre by a broad band of buff, to which succeeds another broad band of blackish brown; two centre tail-feathers grey, the remainder blackish brown, largely tipped with light grey; chin dull white, passing into greyish brown on the chest; the remainder of the under surface greyish brown, each feather having a broad stripe of dull white, bounded on either side with black running down the centre, the lines becoming blended, indistinct, and tinged with buff on the centre of the abdomen; under tail-coverts buffy white, crossed by irregular bars of black; irides brown; bill and feet black.

The female differs in having the chestnut marking round the eye much richer, and in having, in place of the greyish brown on the breast, a series of feathers of a rusty red colour, with a broad stripe of dull white down their middles, the stripes appearing to radiate from a common centre: in all other particulars her plumage resembles that of the male.

The figures are those of a male and a female of the natural size.



CLIMACTERIS MELANOTUS, *Gould.*

Black-backed Tree-creeper.

Climacteris melanotus, Gould in Proc. of Zool. Soc., Part XIV. p. 106.

FOR this additional species of the limited genus *Climacteris*, a form confined to Australia, we are indebted to Dr. Leichardt's Expedition from Moreton Bay to Port Essington. It was killed in latitude 15° 57' south, on the eastern side of the Gulf of Carpentaria, and is rendered particularly interesting to me as being one of the birds procured by poor Gilbert on the day of his lamented death, the 28th of June 1845, which untoward event prevented him from recording any particulars respecting it: all therefore that I can do, is to point out the differences by which it may be distinguished from the other members of the genus, and recommend to future observers the investigation of its habits.

In the dark colouring and thick velvety plumage of the upper surface it is most nearly allied to the *Climacteris melanura*, but differs from that species in being destitute of the lanceolate marks on the throat, and from all others in the dark colouring of the back.

The usual distinction of the sexes—the finer colouring of the female—exists in this as in the other species of the genus; they may be thus described:—

Superciliary line and throat buffy white; line before and behind the eye, all the upper surface, wings and tail dark brownish black; the base of the primaries, secondaries and tertiaries, and the under surface of the shoulder buff; under surface pale vinous brown; the feathers of the abdomen with two stripes of black running parallel to and near the stem, the space between dull white; at the base of the throat several irregular spots of black; under tail-coverts buffy white, crossed by broad bars of black; irides brown.

The female differs in having the markings of the abdomen larger and more conspicuous, and in having the spots at the base of the throat chestnut instead of black.

The Plate represents the two sexes of the natural size.



CLIMACTERIS MELANURA, *Gould.*

Black-tailed Tree-Creeper.

Climacteris melanura, Gould in Proc. of Zool. Soc., Part X. p. 138.

HITHERTO I had believed that all the members of this genus were confined to the southern portions of Australia, but that such is not the case is proved by the circumstance of Mr. Bynoe having killed the bird here represented on the northern coast. It exceeds all the other species in size and also differs from them in its colouring, particularly in the lanceolate feathers on the throat and in the black colour of the tail. Nothing whatever is known of its habits or general economy, but judging from its structure, it doubtless closely assimilates to its congeners in all these particulars. The specimen I possess, and from which my figure is taken, is, I believe, the only one that has yet been sent to Europe.

Forehead, all the upper surface and the tail-feathers velvety brownish black; the occiput and back of the neck stained with ferruginous brown; primaries and secondaries dark brown at the base and at the tip, the intermediate space buff, forming a conspicuous band across the wing when expanded; feathers of the throat white, edged all round with black, giving the throat a striated appearance; abdomen and flanks ferruginous brown; under tail-coverts black, irregularly crossed with bars of buff; bill and feet blackish brown.

The figures represent the bird in different positions of the natural size.



CLIMACTERIS PICUMNUS, Temm.

White-throated Tree-Creeper.

Certhia picumnus, Ill.

Climacteris picumnus, Temm. Pl. Col. 281. fig. 1.—Vig. and Horsf. in Linn. Trans., vol. xv. p. 295.

New Holland Nuthatch, Lath. Gen. Hist., vol. iv. p. 78.

Barred-tailed Honey-eater, Ib. p. 179.?

Certhia leucoptera, Lath. Ind. Orn. Supp., p. xxxvi.?

Le Dirigang, Vieill. Ois. Dor., tom. ii. p. 127.?

Dirigang Creeper, Lath. Gen. Syn. Supp., vol. ii. p. 106. ?—Shaw, Gen. Zool., vol. viii. p. 260.?

Dirigang Honey-eater and var. A., Lath. Gen. Hist., vol. iv. p. 182—183.?

The Common Creeper, Lewin, Birds of New Holl., pl. 25.

THE range of this species is as widely extended as that of the *Climacteris scandens*, being a common bird in New South Wales and the intervening country, as far as South Australia: the precise limits of its habitat northward have not been ascertained; but it does not form part of the Fauna of Western Australia.

The whole structure of this species is much more slender and *Certhia*-like than any other member of its genus, and I observed that this difference of form has a corresponding influence over its habits, which are more strictly arboreal than those of its congeners; indeed so much so, that it is questionable whether the bird ever descends to the ground. It also differs from the *C. scandens* in the character of country and kind of trees it inhabits, being rarely seen on the large *Eucalypti* in the open forest lands, but resorting to trees bordering creeks, as well as those on the mountains and the brushes. I have frequently seen it in the brushes of Illawarra and Maitland, in which localities the *C. scandens* is seldom if ever found. While traversing the trunks of trees in search of insects, which it does with great facility, it utters a shrill piping cry: in this cry, and indeed in the whole of its actions, it strikingly reminded me of the Common Creeper of Europe (*Certhia familiaris*), particularly in its manner of ascending the upright trunks of the trees, commencing at the bottom and gradually creeping up the bole to the top, and generally in a spiral direction. It is so partial to the *Casuarinæ*, that I have seldom seen a group of these trees without at the same time observing the White-throated Tree-Creeper, the rough bark affording numerous receptacles for various kinds of insects, which constitute its sole diet. I have never seen this species near the water-holes, and I feel assured it has the power of subsisting without drinking.

The breeding-season is in September and the three following months. The nest is built of grasses, is warmly lined with feathers, and is placed in the hollow branch or bole of a tree. The eggs are three in number, of a dull white thinly speckled with fine spots of rich brown, and a few larger blotches of the same colour; they are ten lines long by eight lines broad.

Crown of the head and back of the neck sooty black; back olive-brown; wings dark brown, all the primaries and secondaries crossed in the centre by a dull buff-coloured band; throat and centre of the abdomen white, the latter tinged with buff; feathers of the flanks brownish black, with a broad stripe of dull white down the centre; rump and upper tail-coverts dark grey; under tail-coverts white, crossed by several bands of black, each of which being separated on the stem appear like a double spot; tail greyish brown, crossed by a broad band of black near the tip; bill black; the under mandible horn-colour at the base; feet blackish brown.

The female is precisely the same in colour, with the exception of having a small orange-coloured spot just below the ear-coverts, and by which she is at once distinguished from her mate.

The figures are those of a male and female of the natural size.



ORTHONYX SPINICAUDUS, Temm.

Spine-tailed Orthonyx.

Orthonyx spinicaudus, Temm. Pl. Col., 428 male, 429 female.—Less. Traité d'Orn., p. 315.—Swains. Class. of Birds, p. 321.

——— *Temminckii*, Vig. and Horsf. in Linn. Trans., vol. xv. p. 294.

——— *maculatus*, Steph. Cont. of Shaw's Gen. Zool., vol. xiv. p. 186.

THE Spine-tailed Orthonyx is very local in its habitat, being entirely confined, so far as I have been enabled to ascertain, to the brushes which skirt the southern and eastern coasts of Australia, such as occur at Illawarra, and in the neighbourhood of the rivers Manning, Clarence and MacLeay. It is usually found in the most retired situations running over the prostrate logs of trees, large moss-covered stones, &c.; further than this, nothing is known of its habits and economy. I ascertained by an examination of the stomach that the food consists of insects, principally of the order Coleoptera, and that the white throat distinguishes the male and the rufous throat the female. A knowledge of the situation and form of its nest and the number and colour of its eggs would probably afford some clue to its real affinities; at present I do not know to which group it truly pertains, and I very much regret that circumstances did not admit of my settling this point by a further observation of the bird in a state of nature: as it is very solitary in its habits it is seldom seen, and it would consequently require many months' residence to become tolerably acquainted with it, and to acquire a knowledge of these desirable facts.

The male has the crown of the head and upper part of the back reddish brown, with a large mark of black on each feather; lower part of the back and upper tail-coverts rich rufous brown; wings black; coverts largely tipped with grey; primaries crossed with grey at the base; apical half of the primaries and the tips of the secondaries dark brownish grey; tail dark brown; sides of the head and neck dark grey; throat and chest white, separated from the grey of the sides of the neck by a lunar-shaped mark of deep black; flanks and under tail-coverts grey, stained with reddish brown; bill and feet black; irides very dark hazel.

The female only differs in colour in having the throat rich rust-red.

The Plate represents the male and female of the size of life.



*Two large dark birds with
iridescent green and purple
plumage.*

PTILORIS PARADISEUS, *Swains.*

Rifle Bird.

Ptiloris paradiseus, Swains. Zool. Journ., vol. i. p. 481.—Ib. Class. of Birds, vol. ii. p. 331.—Jard. and Selb. Ill.

Orn., vol. i. pls. 43 male, 44 female.—Steph. Cont. of Shaw's Gen. Zool., vol. xiv. p. 267.

Epimachus regius, Less. Zool. de la Coq., pl. 28, male.—Ib. Cent. de Zool., pl. 3, female.—Ib. Traité d'Orn., p. 320.

——— *Brisbanii*, Wils. Ill. of Zool., pl. xi.

Ptiloris paradisea, G. R. Gray, List of Gen. of Birds, 2nd edit., p. 15.

HITHERTO this magnificent bird has only been discovered in the brushes of the south-eastern portion of Australia; so limited in fact does its range of habitat seem to be, that the river Hunter to the southward, and Moreton Bay to the eastward, may be considered its natural boundaries in either direction. I have been informed by several persons who have seen it in its native wilds that it possesses many habits in common with the *Climacteri*, and that it ascends the upright boles of trees precisely after the manner of those birds. It was a source of regret to me that I had no opportunity of verifying these assertions, but an examination of the structure of the bird induces me to believe that it is more nearly allied to the members of that genus than to any other: that its powers of flight are very limited, is certain from the shortness and peculiarly truncate form of the wing, and this mode of progression is doubtless seldom resorted to further than to transport the bird from tree to tree, or from one part of the forest to another. That it is stationary in the brushes of the Clarence, MacLeay, and all similar districts between the river Hunter and the settlement at Moreton Bay, is evident from the numerous specimens of all ages that have been sent from thence to Europe.

The *Ptiloris paradiseus* is without exception the most gorgeously plumaged bird yet discovered in Australia: the sexes offer the greatest possible difference in the colouring of their plumage; for while the male is adorned with hues only equalled by some species of the *Trochilidæ* or Humming-Birds, the dress of the female is as sombre as can well be imagined. The law which exists wherever there is a great difference in the colouring of the sexes causes many parti-coloured changes of plumage in the immature males during the period of moulting, which however during the first year, and probably for a longer period, cannot be distinguished from the females.

The adult male has the general plumage rich velvety black, glossed on the upper surface with brownish lilac; under surface similar to the upper, but all the feathers of the abdomen and flanks broadly margined with rich olive-green; feathers of the head and throat small, scale-like, and of a shining metallic blue-green; two centre tail-feathers rich shining metallic green, the remainder deep black; bill and feet black.

The female has the whole of the upper surface greyish brown; the wings and tail edged with ferruginous; the feathers of the head with a narrow line of white down the centre; line passing down the side of the head from behind the eye, chin and throat, buffy white; all the under surface deep buff, each feather with a black arrow-headed-shaped mark near the tip.

The Plate represents two males and a female of the size of life.



SITTELLA CHRYSOPTERA, *Swains.*

Orange-winged Sittella.

Sittá chrysoptera, Lath. Gen. Syn. Supp., p. xxxii.—Vig. and Horsf. in Linn. Trans., vol. xv. p. 296.—Less. Traité d'Orn., p. 316.

Orange-winged Nuthatch, Lath. Gen. Syn. Supp., vol. ii. p. 146. pl. 227.—Shaw, Gen. Zool., vol. viii. p. 120.—Lath. Gen. Hist., vol. iv. p. 77. pl. lxiii.

Sitta? chrysoptera, Steph. Cont. Shaw's Gen. Zool., vol. xiv. p. 189.

Neops chrysoptera, Vieill. 2^{de} édit. du Dict. d'Hist. Nat., tom. xxxi.—Ency. Méth. Orn., Part III. p. 915.

Sittella chrysoptera, Swains. Class. of Birds, vol. ii. p. 317.

Mur-ri-gang, Aborigines of New South Wales.

THIS species appears to be as much confined to the south-eastern part of Australia as the *Sittella pileata* and *S. leucoptera* are to their respective portions of the country; the former inhabiting the western, and the latter the northern parts of the continent. New South Wales then is the true habitat of this species, over nearly every part of which it is rather plentifully distributed; more abundantly so, I should say, than is the Nuthatch in Europe, to which it offers considerable similarity in its habits, actions, and economy. I have generally observed it in small companies of from four to eight in number, running over the branches of the trees with the greatest facility, and assuming every possible variety of position; often in that which distinguishes the actions of the Nuthatch from those of all other European birds, namely, that of traversing the boles of the trees downwards, not, like the *Climacteris*, with a backward shuffle, but with the head pointing to the ground. The whole tribe of *Sittellæ* live exclusively on insects and spiders, for the capture of which they possess an admirably constructed bill.

During its flight, which is quick and darting, the red mark on the wing shows very conspicuously; its powers of wing are, however, seldom brought into action, further than to enable it to pass from one tree to another.

Although I possess a nest and eggs, which I have reason to believe are those of the present species, I could not ascertain with certainty that this was the case, or the situation of its breeding-place.

The colouring of this species is more sombre, and has the markings of the head less decided than any other species of the genus. The darker colouring of the head of the female, however, which is spread over the ear-coverts, at once points out to the ornithologist the sex of any specimen he may possess of this genus.

The male has the head dark brown; all the upper surface grey, with a broad streak of dark brown down the centre of each feather; wings dark brown, with a broad patch of rich rufous crossing the primaries and secondaries; upper tail-coverts white; tail black, the outer feathers tipped with white; all the under surface grey, with a faint streak of brown down each feather; under tail-coverts white, crossed near the tip with a spot of brown; bill horn-colour at the base; irides cream-colour; eyelash light buff; feet yellow.

The female differs only in having the head of a darker tint of brown.

The figures are of the natural size.



SITTELLA LEUCOCEPHALA, *Gould.*

White-headed Sittella.

Sittella leucocephala, Gould in Proc. of Zool. Soc., Part V. p. 152 ; and in Syn. of Birds of Australia, Part IV.

My collection contains three specimens of this new species of *Sittella*, two of which were received from the neighbourhood of Moreton Bay and the other was procured during Dr. Leichardt's overland expedition to Port Essington, Mr. Gilbert having killed it near Peak-Range Camp on the 27th of January 1845 ; the latter, which is figured on the right-hand side of the plate, differs from the former in the greater purity of the white colouring of the head, and in the darker tint of the striæ which run down the centre of each of the feathers on the breast ; and it is possible that it may hereafter prove to be distinct.

Head and neck pure white ; upper surface greyish brown with darker centres ; under surface greyish white, with a stripe of brownish black down the centre of each feather ; wings dark brown, crossed by a band of pale rusty red ; tail brownish black, the middle feathers slightly, and the outer ones largely tipped with white ; upper tail-coverts white, the lateral feathers with a patch of dark brown in the centre ; under tail-coverts brown, tipped with white ; irides greenish yellow ; base of the bill, nostrils and eyelash orange-yellow.

The figures are of the natural size ; the one with the white head being a female, as ascertained by dissection.



SITTELLA LEUCOPTERA, *Gould.*

White-winged Sittella.

Sittella leucoptera, Gould in Proc. of Zool. Soc., Part VII. p. 144.

THE present bird, which is a native of the northern parts of Australia, is a perfect representative of the *Sittella chrysoptera* of the south coast, to which species it is most nearly allied. The contrasted style of its plumage, together with the white spot in the wings, sufficiently distinguish it from every other species of the genus yet discovered. It is found in the Cobourg Peninsula, but is nowhere very abundant: it is mostly met with in small families of from four to twelve in number. Its note, actions and general habits are precisely similar to those of the other members of the genus.

The sexes differ from each other in the markings of the head; the male has the summit only black, while the female has the whole of the head and ear-coverts of that colour.

The male has the forehead, crown of the head and occiput deep black; wings black, with a broad band of white crossing the primaries near the base; tail black, the lateral feathers tipped with white; throat, under surface and upper tail-coverts white; under tail-coverts white, with a spot of black near the tip of each feather; back greyish brown, the centre of each feather streaked with blackish brown; irides ochre-yellow; eyelash straw-yellow; bill straw-yellow, tipped with black; legs and feet lemon-yellow.

The Plate represents the two sexes and an immature bird of the natural size.



SITTELLA PILEATA, Gould.

Black-capped Sittella.

Sittella pileata, Gould in Proc. of Zool. Soc., Part V. p. 151, male.

——— *melanocephala*, Gould in Ibid., p. 152, female.

Goo-mal-be-dite, Aborigines of Western Australia.

THIS species of *Sittella* inhabits the south-western portion of Australia, and enjoys a range extending over several degrees of longitude. It is, however, more strictly speaking, one of the species pertaining to the Fauna of Western Australia. I killed several examples during my excursion into the interior of South Australia, and I transcribe from my journal the following notes on the subject:—"I met with a flock of these birds on the hills near the source of the River Torrens, about forty miles northward of Adelaide: they were about thirty in number and were extremely shy, keeping on the topmost branches of the trees, and the whole company flying from tree to tree so quickly, that I and my companion were kept at a full run to get shots at them."

The following is from Mr. Gilbert's notes made in Western Australia:—

"An extremely active bird, running up and down the trunks and branches of the trees with the utmost rapidity, always in families of from ten to twenty in number. It utters a weak piping note while on the wing, and occasionally while running up and down the trees. Its flight, which is generally performed in rather rapid undulating starts, is of short duration."

In a letter lately received from Mr. Gilbert he informs me, on the authority of Mr. Johnson Drummond, that this species "makes a nest of short strips of bark attached together and fastened to the branch with cobwebs, and so covered over with them as to be very nearly smooth; the cobweb is laid or felted on, not wound round the pieces; portions of lichen are frequently attached. The nest is generally placed in the highest and most slender fork of an *Acacia*, and is most difficult to detect, from its very diminutive size and from its resembling a slight excrescence of the wood; the eggs are three in number, of a whitish colour, with circular green spots regularly distributed over the whole surface. The bird breeds in September, and Mr. Johnson Drummond states that the margin of the nest is brought to a sharp edge like that of *Piezorhynchus nitidus*. Would you not have supposed that this bird breeds in the holes of trees like the Nuthatch of Europe?"

On reference to the synonyms given above, it will be seen, that prior to my visit to Australia, I regarded, described and named the two sexes of this bird as distinct species, an error which the opportunity I subsequently had of observing the bird in a state of nature and of dissecting recent specimens has enabled me to correct; the black-headed specimens proving to be females, and those with a black cap only males.

The male has the forehead, stripe over the eye, throat, breast, and centre of the abdomen white; crown of the head black; ear-coverts, back of the neck and back greyish brown, with a small stripe of dark brown down the centre of each feather of the latter; rump white; upper and under tail-coverts greyish brown, crossed with an arrow-shaped mark of dark brown, and tipped with white; tail black, the centre feathers slightly and the outer ones largely tipped with white; wings blackish brown, with a large patch of rufous in the centre, interrupted by the blackish brown margins of some of the secondaries; all the feathers slightly tipped with greyish brown; flanks and vent greyish brown; bill yellow at the base, black at the tip; feet beautiful king's-yellow; irides buffy hazel; eyelash buff.

The female differs in being somewhat darker on the upper surface, and in having the whole of the upper part of the head including the orbits deep black.

The figures represent both sexes of the natural size.

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